



BERKSHIRE FIRE DISTRICT NEWSLETTER

Dear Resident of the Berkshire Fire District,

May 16, 2007

Special Publication

July 2007

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In response to significant findings noted by a 2006 New York State Public Employees Safety and Health inspection of the Berkshire fire station, the Board of Fire Commissioners authorized creation of a citizens committee to review the findings of that report, the general condition of the station, and the needs of various groups using the station. The committee has been asked to provide the board with a recommendation by December 2007 regarding the future of that building.

The Fire Station Review Committee was formed in January of 2007 and has made significant progress toward our goal. So far we have toured the station and examined its condition, reviewed the results of last year's New York State inspection, and visited fire stations in neighboring districts. By far our biggest accomplishment has been obtaining an inspection of the

existing building by a professional architect at no cost to the district.

After his inspection the architect created a detailed report of his findings. Attached is a copy of that report. The committee is currently working to develop cost estimates for repairs and renovations to resolve as many of the inspection findings as possible. Replacement of the building is another option being explored.

The Berkshire Community Association (BCA), a group of residents heading the efforts to restore the Community Hall, has offered to submit a grant proposal to the New York State Council on the Arts. Proceeds from this grant, if awarded, would provide funding for professional assistance with detailed planning for improvement of the buildings and property owned by the Fire District.

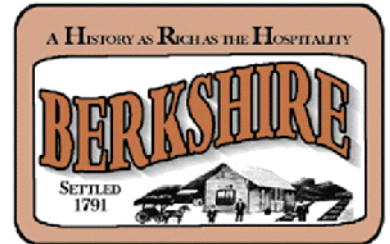
A public meeting has been scheduled for August 30, at 7:30

PM at the fire station to offer you the opportunity to meet with the committee members, view the fire station and participate in discussions on possible courses of action. We urge you to read the enclosed report, attend the public meeting, and participate in this project.

Sincerely,

Members of the Fire Station Review Committee:

- Dick Bierl
- Peggy Davis
- Bill Leonard
- Bill Morris
- Tim Pollard
- Jim Simmons
- Monica Vandenburg
- Bob Wait
- Fraser Williams



Facility Background . . .

The current Berkshire Fire Station was erected in 1962 and consists of a pre-engineered steel framed Butler Building set approximately 68 feet west of New York State Route 38 in the village of Berkshire, New York. The original facility was approximately 50 feet wide and 50 feet long and runs parallel to the state roadway. This structure currently houses the Berkshire Fire Department apparatus and operations functions.

There are three steel frame lines which represent the structural system of the facility and they are arranged in a north

to south configuration. The first structural frame line lies along the eastern-most wall of the facility and consists of steel columns supporting sloped steel beams which correspond to the shallow pitched roof line of the facility. The center structural frame line is a typical pre-engineered steel frame bent with tapered columns and sloped beam which also follows the shallow roof pitch. The third frame resembles the first frame line and relates to the west wall of the current Apparatus Bay which was the original west exterior wall. This structural configuration

created two bays of approximately 25 feet width each which are spanned by steel purlins supporting the standing seam metal roof

In 1971 an addition was erected to the west of the original structure and is approximately 32 feet wide by the depth of the structure (50 feet) and houses the toilet facilities, kitchen facilities and meeting spaces for the station. Buried under this portion of the facility is the well for the station. The septic system for the facility is located to the west of the addition.

(Continued on page 2)

Facility Background (cont'd) . . .

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The building is protected from the weather by a standing seam roof, painted steel siding system and steel doors. The windows are of two different types and include the original 1962 round cornered windows as well as more traditional windows.

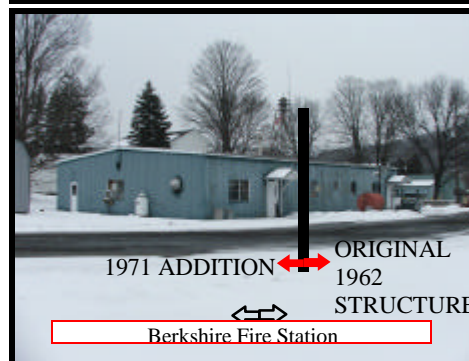
The building and addition were erected on a concrete masonry unit (concrete block) foundation system and has a concrete slab floor throughout the facility with an access hatch to a space below the floor where the well pump is located. The facility is heated by heating fuel oil which is stored in an above ground tank located to the south of the

facility. The facility was minimally insulated with improvements made with blown-in Styrofoam bead insulation added to the fiberglass insulated walls and Styrofoam board insulation installed below the fiberglass batt roof insulation. The Styrofoam board roof insulation has almost entirely been removed as a result of a New York State Department of Labor Public Employee Safety and Health (PESH) inspection conducted recently that identified the insulation as being a safety and code violation.

The interior of the Apparatus Bay is finished in metal panel with the exception of the gypsum board office area constructed inside of the space.



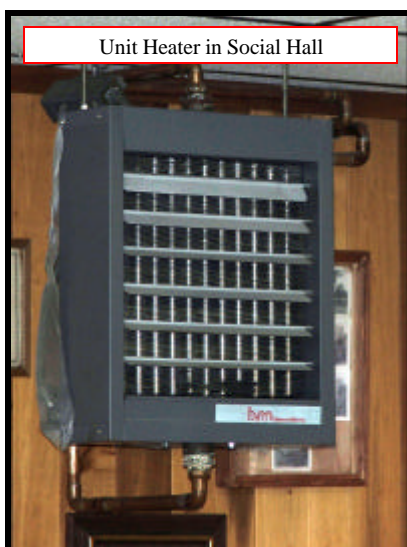
Berkshire Fire Station original structure



1971 ADDITION ORIGINAL 1962 STRUCTURE

Berkshire Fire Station

The original structure was constructed in 1962 and remains substantially unchanged



Unit Heater in Social Hall

The 1972 Addition . . .

The 1972 addition (Social Hall) section of the facility is finished with wood paneling. And has a vinyl tile flooring system installed.

There are two toilet facilities included in the Social Hall section of the facility as well as a kitchen area and meeting area.

Heat for the Social Hall is provided by an oil fired boiler located in the Apparatus Bay supplying a unit heater suspended from the ceiling in the Social Hall. There is no mechanical ventilation system in the Social Hall. There are window air conditioners for cooling.

Utilities and Services . . .

The Apparatus Bay is heated by an oil-fired furnace suspended from the structure above and it is ducted throughout the bay.

Lighting in the facility is provided by fluorescent lights in the Apparatus Bay suspended from the structure above. Lighting in the Social hall is primarily fluorescent lighting with incandescent lighting in the toilet rooms.

Electrical service for the facility is provided overhead by a single phase elec-

trical supply at the southeast corner of the building. Telephone service also enters the building at this location.

The department's fire horn is located atop the original 1962 structure.

There are five pieces of emergency apparatus housed in the Apparatus Bay. There are two engines, one tanker, one rescue truck and one ambulance. The ambulance is operated by the Ambulance Company and not by the Fire Department.



Oil fired furnace in Apparatus Bay

Analysis . . .

This report provides for architectural analysis, New York State Building and Fire Code review, Asbestos recommendations and Safety recommendations for fire station safety. This report does not include full mechanical, plumbing, electrical or structural analysis of the existing conditions. A detailed study should be undertaken based upon the decision of the Board of Fire Commissioners as to the future of this structure.

Fire and Property Maintenance Codes . . .

This facility was constructed and added onto, prior to the adoption of a state-wide building code and as such it exists as a legal structure in New York State. There is no obligation to correct Building Code deficiencies unless they are addressed in the New York State Fire Code and Property Maintenance Code which all structures, new and existing must conform to unless a sufficient amount of work is done to the buildings. The New York State Fire Code requires a two hour fire separation between the boiler and the Apparatus Bay as well as the Boiler and the Social Hall. There currently is no enclosure around the boiler and there is no separation between the Apparatus Bay and the Social hall. The oil-fired furnace supplying the Apparatus Bay should also be enclosed in a two-hour enclosure. Code does not allow for flammable or combustible materials to be stored near or within a boiler room.

This would prohibit all gasoline and fuel containing equipment (trucks and other equipment) from being stored in the Apparatus Bay, as well as all the other flammable materials .

There are sufficient means of egress from each area of the structure, however the emergency exit from the Apparatus Bay to the north is obstructed by the tanker apparatus. A 36" wide egress path is required around all apparatus and to each egress door. There is no manner that this condition could be maintained with the current number of apparatus pieces housed in the bays and the volume of materials being stored in the space.

Despite the recent removal efforts from citations made by the PESH inspector there is still exposed Styrofoam insulation board in the ceiling spaces in the Apparatus Bay. All exposed Styrofoam, or any other type of plastic

finish is required to be covered by at least 1/2" of fire rated gypsum board or other Underwriter's Laboratory (UL) system.



Compliance to all current Building Code requirements is not mandatory unless the Fire District undertakes a significant project. Compliance with Fire Code is mandatory.

The Kitchen . . .

The Social Hall function of the station includes an open kitchen area to a place of assembly. By code there should be a fire separation between the two functions. This separation would provide for fire protection and noise separation between the two functions.

The kitchen space houses two deep fryers and a grill. The presence of any appliance in a commercial kitchen that can produce grease vapors or smoke requires that a fire suppression system

be incorporated into the exhaust hood for those pieces of equipment. The kitchen has an exhaust hood, but lacks the fire suppression system needed to conform with this requirement. Due to the need for a fire suppression system in the kitchen, all portable fire extinguishers associated with the space need to be type "K" extinguishers. One type "K" extinguisher is located in the space, but the others need to be type "K".



Fuel Storage . . .

The above ground fuel storage tank should be located within spill prevention construction to protect the environment in the event of a leak, rupture, or overflowing of the heating fuel tank in accordance with the Environmental Protection Agency (EPA) and the New York State Department of Environmental Conservation (DEC).

Water System . . .

The well for the facility is located underneath of the Social Hall area. It is also downhill from the primary septic system and not separated by the recommended distances as prescribed by the Tioga County Department of Health. There is no treatment to the water for bacteria control. A new well should be provided in a location further from the current septic system and preferably uphill from the system.



Panel corrosion south wall of building



Panel corrosion (rust) near door

Weather Integrity—Siding . . .

The siding is showing signs reaching the end of its useful life as being the primary protection against weather. There are locations where rust and corrosion have eaten away at the bottom of the wall panels and have allowed mice and other rodents access into the building. These conditions have been exacerbated by the approximately 2” exposure of concrete block foundation and proximity to grade and pavement which allow rain water to splash back up onto the siding and onto the back surfaces which will accelerate the corrosion process.

The siding also has started to reject the paint. Initial review of this condition indicates that the paint as well as the steel has failed in the bonding process. The steel siding was galvanized, and it appears as though the galvanization is no longer permitting paint to adhere. This pickling of the galvanized surfaces will result in rust and corrosion in the panels if left untreated.

Storm Water Control . . .

There is one floor drain in the Apparatus Bay that leads to the original septic system located to the south of the facility. The former septic system is functioning as a grey well for diffusing this water into the ground. There is no grease or oil separator included in this system, which would prevent grease and oils spilled from apparatus from entering into the ground water system.

The site storm water control consists of allowing water to run off the site in sheeting fashion into the municipal storm system in the public streets.

Doors . . .

There are four exterior exit doors for the facility and three overhead doors for apparatus access. The overhead doors are in good condition, but lack proper height for clearance of fire apparatus passing through their openings. Based upon grade slope and slab height, there is insufficient clearance to assure safe entry and exit by the vehicles. The overhead doors are approximately ten feet high. Current recommended minimum overhead door clearances for fire

apparatus is twelve feet, with fourteen being more typical to allow for antennae to pass without damage. The configuration of the steel frame along the overhead door portion of the facility will not allow for taller doors to be installed. This lack of clearance will and has limited the Fire District’s options for fire apparatus that can be housed within the facility.

The exterior doors have recently been reworked and seem to be functioning

fairly well. Some adjustments to hardware is needed to make opening and closing of these doors better. Two doors that we investigated are hollow core steel doors without insulation. These doors were not designed to be used as exterior doors as they are probably not galvanized. Without an insulated core, these doors are likely to rust out from condensation in the interior of the door and present a heat loss option that could be reduced.

Space Adequacy . . .

The toilet rooms are less than ideal for use in a public use facility. The rooms are too small for proper fixture clearance and use by the disabled. The fixtures are original and do not conform to current water usage standards. The lighting in the toilet rooms consists of unprotected incandescent lighting, which is inefficient and a source for potential contact burns.

Windows . . .

The windows in the Apparatus Bay appear to be the original 1962 windows. These windows are not thermally efficient and are of a configuration which will make replacement difficult. The windows in the 1971 addition are also not thermally efficient, but are of a more conventional installation which would make replacement easier. Almost all of the

windows are allowing air infiltration into the building which increases the heating and cooling costs for the facility. Most of the windows are showing signs of reaching the end of their anticipated life. Replacement of the windows would allow for energy savings and improvement in weather integrity for the building.

Structure . . . The Structural framing system for the entire facility is in good condition. There are no indications of significant damage to the columns, beams or roof purlins. The roof purlins indicate rusting which appears to be surface in nature and due in most part to the failure of the previous roof. The wall purlins were not inspected as this would require removing interior finishes. The wall purlins are not structural beyond the function of supporting the exterior metal siding and the interior wall paneling and siding. Should there be deterioration to the wall purlins, replacement is an option.

Foundation System . . . The Foundation of the facility is constructed of concrete masonry units, which are hollow core concrete or cinder blocks with occasional reinforcement. The top surface of this foundation wall is not protected from the weather and is exposed up to two inches. This exposure has caused several locations to erode away the exterior face of the block and allows water to enter into the foundation wall freely which can lead to structural failure due to freeze/thaw activity and constant exposure to moisture. The foundation wall is deteriorating more rapidly than the rest of the facility and should be addressed before much more damage occurs and the foundation begins to fail structurally. The installation of flashing at the base of the wall to divert water away from the building and off of the exposed foundation will increase the remaining life of the concrete masonry units.



Asbestos . . .

There is a strong possibility that asbestos containing building materials are present in this building. Asbestos was used in buildings for its durability, water-resistance and insulation properties until it was banned by the government. Asbestos may be found in floor tiles, floor tile mastic, flooring adhesives, window and door caulking, boiler insulation, pipe insulation and caulking to name a few potential locations. Current building code requires that an asbestos survey be performed on any structure prior to renovations or demolition. A survey for this building will be needed if alterations are to be performed to it or the structure is to be removed.

Accessibility . . .

While the entries to the facility are at grade for the Social Hall and Apparatus Bay, they do not conform to the dimensional requirements prescribed in the Americans with Disabilities Act (ADA) for approach and side clearances. The building lacks proper circulation widths for use by wheelchair users and does not have tactile identification for the visually impaired. Thermal protection from hot pipes under the sinks in the toilet rooms is not installed and presents a hazard to handicap persons.

Fire Apparatus Bay . . .

The current Apparatus Bay was designed to house four vehicles, that were substantially smaller than the five current trucks in use today and in production for the future. The existing structure is not tall enough for modern firefighting apparatus and lacks sufficient clearance for maintaining the current vehicles indoors. The recommended structural height for an apparatus bay with vehicles that are twelve feet tall would be approximately 20 feet to allow for loading of hoses and maintenance to vehicles inside the apparatus bay. This height would also allow for placement of lighting and mechanical system ductwork to maintain a clear zone above the trucks and allow for air flow and lighting to be improved. The current pumper/engine configurations being produced are now exceeding 35 feet in length. This length of vehicle would create the need for a minimum bay depth per vehicle to be 45 feet to allow five feet for circulation around the piece of apparatus. While the current apparatus bay is approximately 50 feet in depth, the configuration would only allow for four vehicles to fit in the configuration with one bay being too short for any current firefighting apparatus due to the office configuration in the first bay.

The width of current fire apparatus require an overhead door that is a minimum of twelve feet wide to clear mirrors upon entry and exit through the openings. The majority of fire apparatus being fabricated now measure up to 11 feet in width

including mirrors. The side clearance for apparatus should be five feet as well to allow for opening of compartments and loading and unloading of equipment making the bay width for each bay 16 feet. It was noted by the Fire Chief and the Fire Commissioner that mutual aid departments backfilling the station during an emergency are most often unable to place their apparatus inside the stations which can cause issues with freezing in inclement weather.

Based upon the configuration of two pumper/engines, one tanker, one heavy rescue and one ambulance, the minimum apparatus bay dimensions for single stacking vehicles would be 84 feet wide and 45 feet deep inside. This allows only enough room for apparatus and no other functions in the Apparatus Bay area. Functions such as turnout gear storage, firefighter donning and equipment maintenance would require more space whether integrated into the bays or as separate spaces adjacent to the bays. From a safety standpoint firefighter donning and turnout gear should not be located in the same space as the fire apparatus as there is the potential for personal injury while vehicles are moving in or out of the station. Maintenance space can be co-located with the apparatus as this function is unlikely to occur while vehicles are moving in or out.

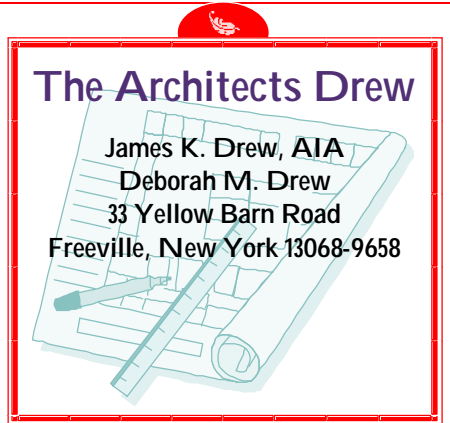
Based upon apparatus and the recommended clearances around them, the existing apparatus bays are not adequate to continue serving this function.

Summary of Findings . . .

The Berkshire Fire District is faced with a situation which is not uncommon in the volunteer fire service of today. The situation involves aging facilities, dwindling volunteer ranks and apparatus that keep changing and no longer "fit in" with the infrastructure available. The question that has to be answered is ***"How can a Fire District be responsible stewards of the publics monies, update equipment and facilities, retain current volunteers and attract more volunteers?"*** The answer is to start with a plan that can be implemented in phases

that can be made more affordable for the tax payers in the community. The existing building may not serve it's original intended function any longer, but it can continue to serve in another capacity as long as a certain level of work is performed upon it before it can deteriorate further. The community can be the beneficiary of a larger, safer and more functional space to use as a community center which will give them a return on their investment and an improved appearance to an important public building.

The information presented in this preliminary review and assessment is not intended to create a solution, but rather a stepping stone to opening the lines of discussion and thought into finding a program that fulfills the current needs of the Berkshire Fire District and plans for the future development of emergency services in Tioga County. Further study, programming and needs assessment are required to determine short term needs and long terms goals that should apply prior to making any final facility decision.



Thank you for the opportunity to contribute towards improving the future of the Berkshire Fire District.

A handwritten signature in black ink, appearing to read "J. Drew", is positioned below the thank you message.

The Berkshire Fire District invites you to a presentation of the preliminary information gathered about the future of the Berkshire Fire Station.

Presentation, Questions and Answers to be held

August 30, 2007 starting at 7:30 PM at the Berkshire Fire Station.

Please feel free to contact Jim Simmons @ 657-8220 for details