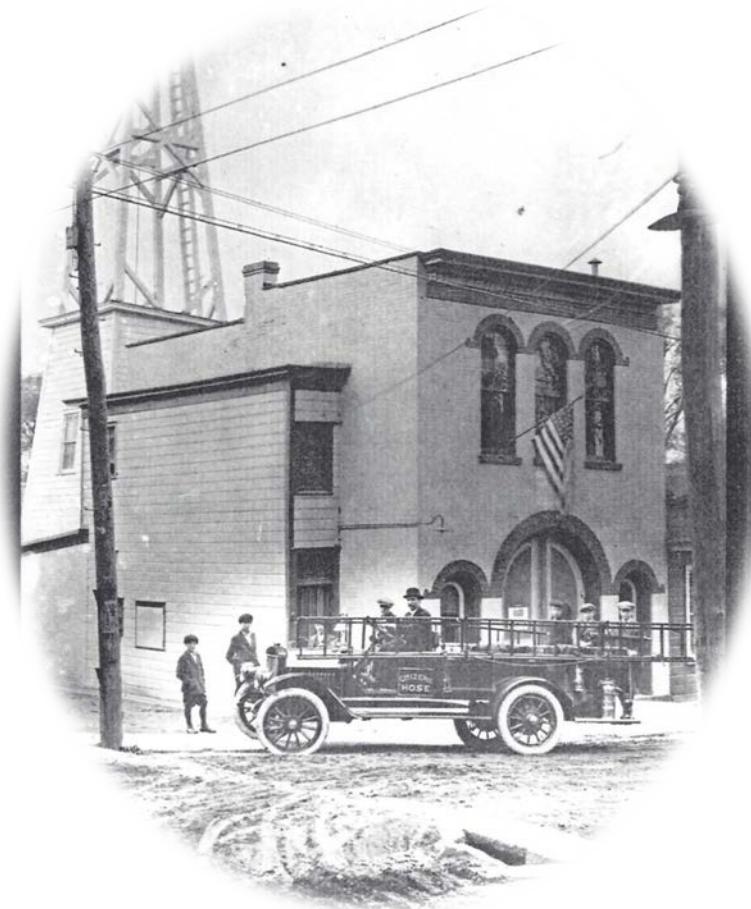


**Historic Building Condition
Survey Report**
of
WM. CURTIS NOYES ENGINE HOUSE
Castleton-on-Hudson, New York



Prepared by
LANDMARK CONSULTING LLC



Historic Preservation & Architectural Services

83 Grove Avenue, Albany, NY • www.landmarkconsulting.net

Fall/Winter 2019

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I. Introduction & Summary Description of Property & Significance:

Landmark Consulting, a Historic Preservation & Architectural services firm, was commissioned to perform a building survey and condition assessment of the historic W. Curtis Noyes Engine House in Castleton-on-Hudson, New York in the late summer of 2019. This building was originally constructed in 1871 after a severe fire in the village. Despite fifty-years of concern for the protection against fire, the Village did not have a dedicated fire engine or engine house. Beginning in 1827, money was budgeted within the Village for fire buckets, hooks, and ladders and a contingency fund for the purchase of a future fire engine. The fire of 1871, for which the Village sent letters to the Mayors and Fire Departments of Albany and Hudson for their help in extinguishing the major blaze, caused the organization of the first Castleton fire department when Village Board President Frank P. Harder appointed a committee to purchase a fire engine and accompanying equipment. Work on the corresponding Engine House on land donated by William Curtis Noyes began in May of 1871 and was completed that summer. The Castleton Fire Department established by a Village board Meeting in March of 1871 consisted of two companies – the Frank P. Harder Steam Engine Company No. 1 and the John W. McKnight Hose Company No. 2. These early companies were composed of 60 men for the engine company and 20 men for the hose company. In 1897 the fire company changed its name once again and became Citizens Hose Company No. 1. In May of 1879, the Village Board approved the purchase of a Bell & Hose Tower to be built on the lumber yard lot across from the Engine house. In 1899, a 1,200 pound bell was purchased from the Meneeley Bell Works of Troy and the original bell tower was torn down and replaced with a new one erected on top of the firehouse at the southeast corner. The new bell was mounted in the new tower on September 13, 1899 and was officially designated the fire alarm system of the Village. This tower was removed in October of 1922 and the bell is replaced by a fire siren in 1929.

For the first forty years, the Fire Company had to pump water directly from the Hudson River, as there were no water mains, thus making it difficult to protect buildings on the hills of Castleton. Fire hydrants were first installed in 1897, tested and replaced in 1905 and finally in 1913 the Village developed a water works and sewage system with a stand pipe on Maple Hill Road to increase pressure. In addition to serving as the home of the local fire and hose companies, in 1910,



the Engine House starts to be used for other community functions. It is rented to the Modern American Woodsman Association two nights a week. The Citizen's Band practiced there and the Village Board held meetings here. In 1915 two toilets are installed in the Engine House and in 1927 a concrete floor is installed. In 1903, the engine house was formally dedicated in the memory of William Noyes at the request of his widow and a marble plaque with inscription added over the main doorway. This Romanesque Revival style structure remained in use for over 100 years until 1974-75 when a new

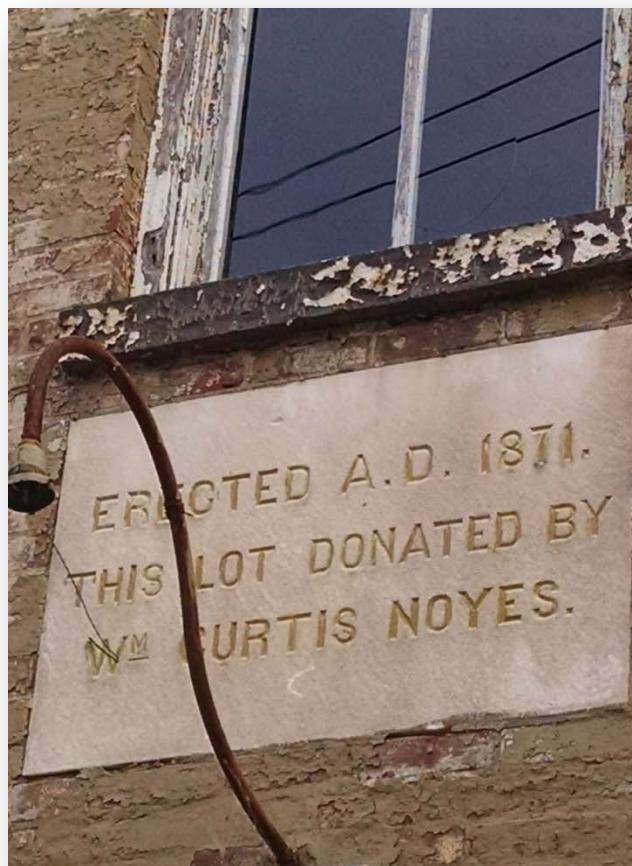
firehouse was constructed. Now owned by the Village, this 1,600 square foot building is currently underutilized due to its conditions and need for building code upgrades.

The W. Curtis Noyes Engine House is not currently listed on the National Register of Historic Places but has been researched and documented as part of the 1993 Castleton-on-Hudson Intensive Level Survey conducted and prepared by Ellen S. Allen, Ph.D, Village Historian and on file with the State Historic Preservation Office.

In addition to the Intensive Level Survey Report, Wayne Bennett researched and wrote up an eight page history on the Castleton Fire Department.

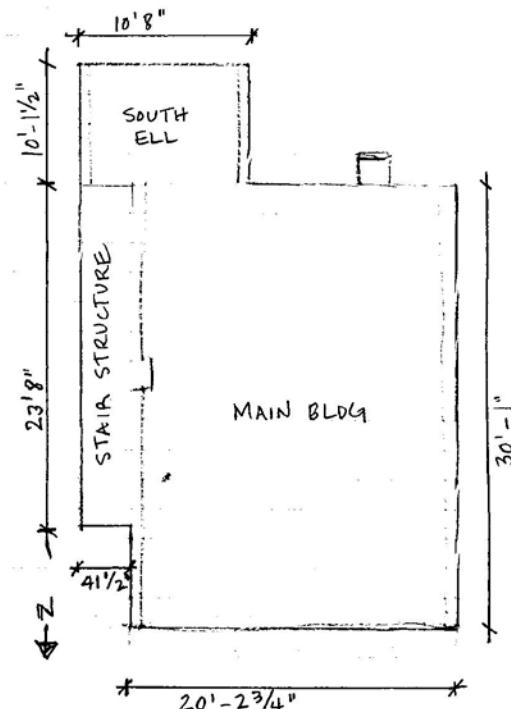
Since the construction of the new Village fire station at 11 Green Avenue in the 1970s, the Village has endeavored to maintain and study the old engine house as a potential venue for community-focused activities. Additional study and restoration efforts are necessary to repair and return the building to its period appearance. With its 150 year celebration approaching in 2021, now it is perfect time to recognize the needs and prioritize the most critical repairs to guide both fundraising efforts and best preservation repair practices.

This project has been funded in part by a grant through the Technical Assistance Grant Program (TAG) of the *Preservation League of New York State* which was awarded in July of 2019. The TAG program is made possible by the *New York State Council on the Arts* with the support of Governor Andrew Cuomo and the New York State Legislature.



II. Building Envelope Survey / Architectural Condition Assessment:

On September 18, 2019, a site visit and interior and exterior building survey of conditions was conducted by Kim & Jack Alvarez of Landmark Consulting LLC. The purpose of this building survey was to assess the conditions of the structure and finishes including the roofing, masonry, pointing mortar, door and window openings and trim, the interior plaster, pressed metal or paint finishes, flooring, and wood elements. The minimal mechanical systems, while not part of this assessment were visually inspected and will be commented on below.



Exterior Features:

Overall, the building is rectangular in shape and footprint with a 20'3 3/4" wide front elevation consisting of a single large garage door at the ground floor level and three evenly spaced round-top windows on the second floor and being 30'1" deep from north to south. Along the east wall there is a 3 1/2 - foot wide enclosed staircase, referred to herein as the "stair structure" and at the rear southeast corner there is a two story ell measuring roughly 10' square. This rear addition is referred to as the "South Ell." There are brick parapets on the west and east walls and the low-sloped roof pitches from the front/north toward the rear/south.

Exterior Masonry Walls:

The brick masonry walls of the main rectangular block are made up of red brick laid in common bond (alternating five courses of stretcher brick and one course of header bricks). These brick walls have various coats of cream, yellow/ochre colored paint in a deteriorated condition. Where the paint finish is cracked, peeled or missing altogether it is evident that the brick walls have been repointed in a number of different campaigns. The second floor window openings are framed by brick with arched header course lintels. On the front (north) elevation, there is a large area near the NE corner where a raking settlement crack spans between the sill of the east-most second floor window to the NE corner of the building. At the NW corner of the front elevation, the paint finish at the upper wall level has been eroded away due to the close proximity of the nearby tree branches. Where the grade is lower than the ground floor level, a slate or bluestone foundation/watertable stone course is visible on the front elevation.



Figure 1: View of northeast corner of building showing front elevation & side stair structure.

On the west elevation, there are no windows or door openings aside of small rectangular vent holes at the first floor level. The brick wall is fully exposed and the lower 5-feet of wall is bare of most of its paint finish. The only elements of note on this elevation are the three diamond shaped tie-rod anchor plates aligned approximately with the second floor plate. There is some extent of mortar wash out where brick coursing need repointing or there are a few brick units that have dislodged or shifted around the lower vent openings.



Figure 2: View of west elevation showing masonry walls.

At the rear of the building, the footprint jogs out in an ell-shaped configuration. The walls of the south elevation of the main building are entirely constructed of brick, whereas only the first floor level of the ell is constructed of brick with the second floor being wood framed and clad in novelty wood clapboards. The yellow painted finish remains roughly intact on the upper level of the south wall, while the lower level is bare of paint or is minimally covered. There is an exterior square chimney that rises from grade to above the roof line at the middle of the exposed south wall of the main building. It appears to have been built at a later date than the building since it is not keyed into the brick wall construction. There are two window openings vertically aligned next to the SW corner of the south wall of the main building and the exposed chimney runs up along the right (east) jamb of these windows. On the other side of the chimney there is a single doorway that is currently blocked up.

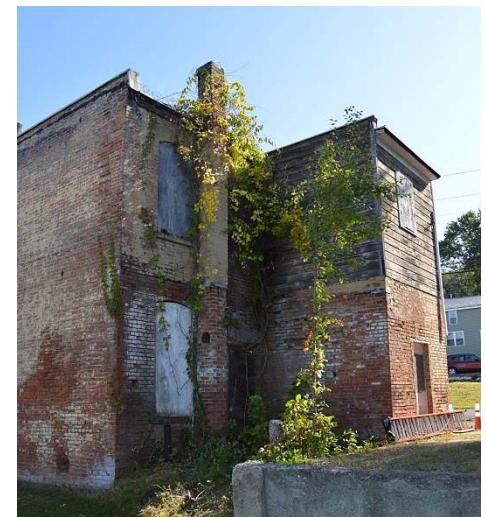


Figure 3: View of southwest corner of building.

There is visible evidence on this south wall of the main building as well as on the west elevation of the ell, of previous roof flashing at the one story level, but no evidence of wall or roof framing connections to either wall. This suggests that the space between the main building and the ell was once enclosed with a later addition that was framed as freestanding and used the existing entry door as the internal connection. It is unknown when this addition was removed or what purpose it served. Overall the south brick wall is in poor condition with extensive mortar washout, cracked or missing brick units and is in need of repointing and repairs.

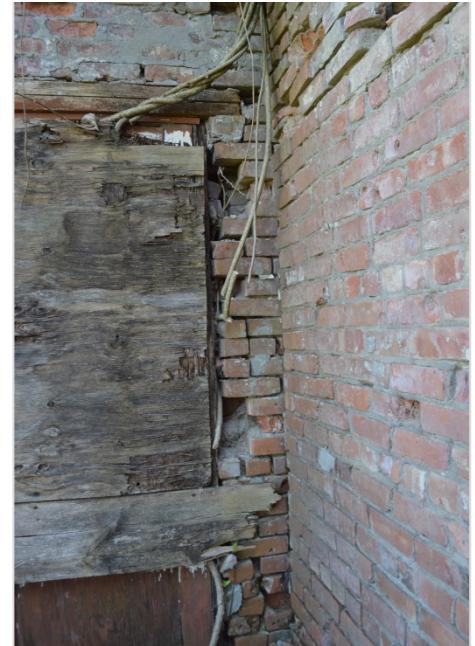


Figure 4: Detail of mortar & brick washout on inside corner of rear wall.

The west wall of the ell is exhibiting the most severe masonry conditions. The brick coursing at the corner of this juncture of main building and ell has extensive mortar wash-out and as a result loose or dislodged brick units. At the upper 20 courses of brick on the west wall of the ell there is extensive bulging of the outer brick wythes, spalled brick units, and numerous dislodged and missing bricks. There appear to be a number of causes impacting this severe condition. First, the roof of the main building is a low slope roof pitched from the front toward the rear without any rear cornice gutter to catch and divert rain water or snow melt.

Secondly, the chimney and lack of vegetation control have contributed to the growth over a long period of wall climbing vines that has attracted, absorbed and retained moisture against this interior corner and caused extensive mortar deterioration. Lastly, it appears that the existing EPDM rubber membrane roof on the main building and ell including the parapets was installed in the last decade, and prior to this, water was directed from the main roof right onto the parapet wall of the ell and likely infiltrated down through the wall cavity and into the brick wall. Freeze and thaw action of a water saturated brick wall, covered with vegetation is what likely led to the bulging and partial collapse of the upper west wall of the ell and the interior corner. Previous pointing campaigns appear to have used a hard Portland cement-based mortar which is too hard and impervious for the soft 19th century brick on this building. This has contributed to the extensive spalling noted around the large hole in the brick wall of the ell. This area of damage also appears to coincide with the location of the previous one story addition roof line and if there was a leak in this roof the brick damage could have gone undetected for some time.

The south wall of the ell is simple in design with brick and the ground floor level and wood cladding at the second floor. There is a doorway centered in the wall at the ground floor and a single window aligned above at the second floor. The brick has a deteriorated paint finish which is more intact at the upper courses and more worn off at the lower courses. There is extensive mortar washout also at the lower courses and there is damage to the brick wall at the southeast corner, likely as a result of vehicular impact. While not currently attached at the roof line, there is evidence that a gutter along the top of the wall emptied into a downspout attached to the southeast corner of the ell. Currently only a portion of this downspout remains in place and it is unclear if it emptied into a subgrade drainage system or simply to an outlet elbow at the base of the wall.

The combination brick and wood clad wall construction of the ell continues around to the east elevation, where it adjoins the stair structure. The lower brick east wall of the ell is exhibiting loss of paint finish and mortar along the lower 15 courses of brick. This deteriorating condition has likely been accelerated due to the close proximity of First Street and the use of deicing road salts. The east wall of the stair structure is clad in wood clapboards however the brick masonry wall of the main building is exposed above the stair structure's roof line as well as near the front northeast corner of the building. At the exposed brick area above the stair structure roof, there are parapet walls that step on either side of a chimney integrated into the east wall. As is typical with most brick parapet walls, deterioration of the brick units, the mortar joints and any paint coating is generally the result of point of roof failure or water infiltration at the parapet flashings. Despite the relatively new roof system, there is evidence at the east parapet walls on either side and below the chimney of water infiltration and masonry damage. The source of the problem may have been addressed and corrected, but the damage remains with mortar washout, paint failure and a slight bulge in the outer brick wythe. The east brick wall near the northeast corner where the stair structure steps back from the front of the building is in good/fair condition with



Figure 5: Loss of brick on west wall of south ell.



Figure 6: View of southeast corner of building.

paint finish in sound condition, intact mortar joints and brick units. Diamond shaped tie-rod anchor plates are visible aligned approximately with the first and second floor plates. At the lower courses near the NE corner, the paint finish is worn away.

Overall, the brick walls are plumb and sound however, there is a visible settlement crack at the front NE corner that should be addressed and the brick walls of the rear SW interior corner should be fully repointed with loose, broken/spalled or missing bricks replaced. The conditions that have contributed to the deterioration, notably inadequate roof drainage, overgrown vegetation, and use of deicing salts near the walls should be corrected.

Wood-clad walls:

As noted above, the stair structure on the east elevation and the second floor level of the south ell are both framed and clad in wood. The three exposed elevations of the upper level of the south ell include wood corner board, wood parapet walls on the east and west sides and a wood cornice on the south eave. The “novelty” style wood clapboard siding have a broad exposure. These clapboards include a number of knots in the wood and are primarily bare of paint finish. The lowest coursing of clapboards simply overhanging the top most brick course. The east elevation of the stair structure is aligned with the east elevation of the south ell. Corner boards however, separate the wood clapboard coursing between the two structures. The coursing is not aligned on this elevation although the exposure appears to have been maintained. The lowest seven clapboard courses on the stair structure appear to either have been replaced in the last few decades or were simply scraped and repainted. The rest of the wood clapboards and wood trim elements are exhibiting long term paint failure and loss. The front northeast corner of the stair structure appears to have settled slightly as indicated in gaps between the clapboards and corner boards on the north elevation. Otherwise, these wood framed and clad structures are in good condition and simply need to be prepared for repainting to protect the wood and ensure long term durability.

Roof:

The roof of the engine house was given a cursory inspection by means of access by an extension ladder. The existing roof is covered with a fully adhered EPDM rubberized membrane over coverboard and possibly rigid insulation board with mechanical fasteners down to a wood deck. While the exact date of installation is not known it appears to be approximately ten (10) years old. The EPDM covers over the front built-out cornice and is also carried up the inside walls of the parapets and continued over the top of each parapet, terminated and counter-flashed with a metal drip edge on the outside face of the parapet walls. The north and east parapets or roof edges are finished with copper drip edge, whereas the west and south sides are finished with aluminum drip edges.



Figure 7: Junction of south ell & stair structure on east.



Figure 8: Second floor south elevation of ell.

The roof slopes from the front (north) toward the rear (south) with a pitch of approximate 1 on 12 (1" vertical drop over 12" horizontal distance). Given the length of the main building there is a total change in height of 35¾ inches from the front to the rear. The rear ell appears to match the pitch and has a total change in height of 11 inches. The joints or seams in the rubber membrane are in fair condition. There is one finishing detail however that seems to be the likely point of failure.

Around the perimeter of the roof at both the horizontal plane of the parapet walls and at the south and north eaves, there are narrow top strips of EPDM, roughly 10" wide that appear to be lapped over drip edge materials and their fasteners.

While attempted to be adhered or sealed directly to the underlying membrane these perimeter strips are lifting at all edges and present a location for water entry. Despite being considered a redundant roofing layer, leaks and water infiltration points could be concealed and undetected under the loose flaps of these strips.

As noted in the previous section, there are two chimneys that project above the roof line. The east chimney is integrated into the parapet wall, while the south chimney is not and simply butts up against the back roof. Neither chimney includes a cricket to divert water around it. While there may have once been gutter troughs hung from the roof eaves on the south end of both the main roof and the roof of the ell, there are none currently and were either removed at the time of recent roof installation or had long been missing from the building.

Without existing roof drainage by means of an internal roof drainage pipe or exterior gutters at the lowest slope, water that is shed off the roof is allowed entry into the building as it sheds down the face of the brick walls, or along the foundations walls under the drip line.



Figure 9: View of main roof looking north.



Figure 10: View toward east side parapet walls.



Figure 11: Roof from north side showing vegetation growing on rear chimney parapet walls.



**Figure 12: Detail of EPDM flashing up against parapet.
Note lifted seam.**

Cornice:

Given the Italianate style of the engine house, there is one original cornice on the north (front) elevation and simple parapet walls and eaves around the rest of the building. This main cornice projects out from the brick wall plane approx. 12-14 inches, is constructed of wood and consists of an un-bracketed soffit, with built-up cornice of fascia, quarter-round, and ogee trim moldings. Below the cornice projection, there is a band of ogee/cyma molding atop of six brick courses laid in an ornamental manner it create a frieze band completing the entablature. Two course of brick are set at a 45 degree angle creating a saw-tooth pattern with the lower four courses set in running (stretcher) bond projecting outward one-third the brick depth. When originally built, this was the only ornamental cornice included. The round top windows at the second floor matched the round top headers or lintels over the ground floor doors, but these arched lintels were constructed of header bricks and did not project outward of the wall plane.



Figure 13: Original main cornice on front façade roof eave.



Figure 14: New cornice over garage door opening.

They remain on the second floor today as a flush detail. The original ground floor door openings comprised of a large central vehicular door and flanking smaller doorways were changed at some point in the 20th century with a single rectangular garage door. This squared opening included a steel lintel concealed by a simple wooden cornice attempting to match the upper cornice detailing. There are other projecting cornices of note at the overhanging eaves of the stair structure on the east side building and the south eave of the ell. In both cases, these cornices have a projection of approx. 10-12 inches with a flat board frieze and simple soffit, with a flat board fascia to which the metal drip edge of the roof is secured. Neither has any decorative or ornamental treatment and simply serves to shed roof drainage out from the plane of the walls.

In all cases, the wood cornices are in fair condition but are exhibiting paint failure as a result of water drainage and exposure to the elements.



Figure 15: Simply eave cornice at stair structure (left).



Figure 16: Simple eave cornice on rear (south) of ell.

Doors:

Aside from the large overhead garage door on the front façade of the building there are four entry doorways at grade level. Two of these doorways, at the south walls of the main building and the ell have been boarded up with plywood and are inactive. The door to the main building appears to be intact on the interior and is a two paneled door with upper glazed panel missing its glass. Two active doorways exist on the north and east walls of the stair structure. The one on the north wall leads right into the lower landing of the staircase to the second floor of the building. This door is of simple glazed wood door covered on the outside with a large sheet of plywood with a rim lock closure. The one on the east wall provides entrance into the ground floor of the main building under the rise of the staircase. This door is a relatively new replacement, metal security door with a simulated six panel design. The overhead door has a configuration of 40 square panels with two having glass. It is hung on a track with rollers and controlled by an electrified overhead door opener.

On the ground floor level there are no interior doors aside from an iron grill door from the jail cell in the rear ell. This iron door was set onto pintel hinges bolted to the brick wall, but is currently removed from these hinges. On the second floor there are three interior doors. There is a four raised paneled door separating the main second floor space from the stairhall on the east wall. It has a cast iron rim lock with tortoise porcelain knob. Also on the east wall is a vertical six paneled wood door with rim lock and porcelain knob. Lastly, there is a two panel wood door on the south wall that provides access into the rear ell second floor room. This door is labeled "Quartermaster" and includes a rim lock with metal knobs.

The second floor doors are in good and functional condition. On the ground floor, ideally all four entry doors should be functional and in good physical condition. The doors on the south wall of the main building and the north wall of the stair structure should be restored to include their glazed upper panels, perhaps with tempered glass for security reasons.



Figure 17: Doorway to stair structure on north elevation.



Figure 18: Boarded up door on south elevation.



Figure 19: New door on east side entry of stair structure. (above)



Figure 20: View of interior second floor doors. (below)

Windows:

The most prominent windows in the building are the original three tall, narrow rounded-top windows on the front elevation at the second floor level. These wood double hung windows have a two-over-two (2/2) muntin configuration and are set within rounded wood frames on stone sills and with brick header course headers. This grouping of three identical windows includes brick piers approximately two and one half bricks wide between each window opening. While these round top headers were decorative features they also serve a functional structural purpose of strengthening the masonry window opening. When the building was constructed the three first floor door openings on the front façade also utilized rounded arch headers. These were replaced with a straight, horizontal header when the current rectangular garage door opening was installed. These three windows are in fair condition with typical alligated or peeling paint finishes on both the interior and exterior. In some locations the wood is bare of paint. All six sash are single paned with exterior glazing putty which is in various states of deterioration. The lower sash of the center window has a large crack in one of the panes of glass, although it is intact. The east north upper sash is intact but has missing or broken panes of glass and is currently covered with a large sheet of foam insulation board on the interior. On the exterior the wood framing elements (frame, stops, brick mold and wood sill) exhibit the greatest extent of paint loss or failure and there are some locations where pieces of the wood trim are missing. Despite long term lack of maintenance and their nearly 150 years of age, these windows are fully repairable and should be restored.

On the rear south elevation, there are three window openings; two near the southwest corner and one on the second floor of the ell. All three windows are covered on the exterior with sheets of plywood. The first floor window near the southwest corner is intact on the interior and consists of a wood, double hung window with six-over-six (6/6) muntin configuration. The wood surrounding trim remains intact on the brick walls of this garage space with evidence of previous plaster finish on the surrounding walls.

Approximately six of the twelve single panes of glass are broken or missing entirely. While in more deteriorated condition than the front second floor windows, these window sash are fully repairable and should be restored as well. At the second floor, there is a window opening directly above this window, where the sash unfortunately has been removed. It is clear that this opening had matching double hung sash at one point given the composition of frame and trim elements (stops, parting beads, pulleys, etc.) This opening is also blocked up on the exterior with a sheet of plywood, but has broken remnants of previously aluminum storm window. This window most likely matched the 6/6 double hung sash that is located below on the first floor. On the rear wall of the ell, there is a shorter 2/2 double-hung window with all four single panes of glass broken and therefore covered on the exterior by a sheet of plywood. Similarly on the east elevation in this same second floor room of the ell, there is a matching short 2/2 double-hung window also with broken panes of glass and boarded up on the exterior. These window sash and their wood frames can and should be repaired and restored. Instead of using plywood for security purposes, it might be worthwhile to install exterior storm windows outfitted with tempered glass.

Lastly on the east and north elevations of the stair structure, there are two second floor window openings, both missing their original sash and with the openings infilled with plywood sheets. The east facing window would have provided natural light into the stair hall at the upper landing, while the north facing window would have illuminated the second floor toilet room. Both openings likely included double-hung 6-lite or 2-lite sash originally and should be restored as such.

Historic photographs indicate that the window sash on the exterior were painted a dark color which is consistent with the styles of this construction period. Each opening offers a depth and framing configuration to allow for either storm sash or shutters on the exterior face.



Figure 21: View of second floor round-top 2/2 window from interior.



Figure 22: First floor boarded up 6/6 window from interior.



Figure 23: Boarded up 2/2 window in south ell from interior.

Interior Features:

The interior spaces of the building are relatively few. The ground/first floor consists primarily of a large garage space in the main building with a single room in the south ell that was at one point used as a jail cell. The lower level of the stair structure contains a small entry vestibule and an early 20th century toilet room under the run of stairs. On the second floor, the staircase leads up to a landing which leads into a large assembly space with a raised dias at the north end. There is a single space in the south ell which according to lettering on the door served as the Quartermaster's quarters. There is a single toilet room over the entry landing of the stair structure, which is currently used for storage. Most of the interior conditions noted below are the result of little use/occupancy, some minor vandalism and no heat or cooling.

Floors:

The ground floor garage space has a poured concrete slab floor that is scored in a grid pattern, possibly for the purpose of creating expansion joints. The rear south ell space and the stair structure/toilet room also have poured concrete floors. Most of these spaces are dirty or have significant amounts of debris piles up on the floors making it difficult to note if there are structural issues or extensive deterioration.

The entry level stair landing of the stair structure has a concrete floor, while the stair treads are wood. This stair run appears to have been rebuilt in recent decades based on the 1-3/4" thick pine boards used for the treads and the minimal wear. The landing at the top of the stair run appear to be 2x wood boards at the edge of the stairs with thin strip tongue and groove floor running in a north-south orientation over the remainder of the landing. It is possible that at some point the stair treads were upgraded, given cracked, wear and age of the old.

The second floor assembly space is finished with thin strip tongue and groove floor boards running in concentric squares outward from a center portion near the center of the space. The majority of the floor boards run east-west across the shorter width of the space, with a border running parallel to the length along the east and west walls. A section of three boards close to the south wall have been broken or pulled up revealing the wide board subflooring beneath. It is not clear why these floor boards were pulled up. There are a few other areas of broken or damaged floor boards for a total of approx. 8-10 damaged boards. The dias that stretches across the full north end is finished with matching tongue and groove floorboards run in a north-south orientation. This strip tongue & groove flooring continues uninterrupted into the Quartermaster's room in the south ell with a wide saddle or threshold at the doorway. Near the chimney breast on the east wall there is an area that appears to be covered with a thin floor cloth. The small toilet room at the front of the stair structure (north end) appears to have a vinyl/linoleum floor covering, although this is difficult to determine given the extent of materials piled up and stored in this space.

The floor boards throughout appear to have once been stained and varnished, rather than painted, but are currently covered with a thick coating of dirt, plaster dust, and paint chips. Regardless, they are structurally sound and could easily be cleaned up and refinished. There are simple square edged baseboards around the perimeter of the room which appears to be missing the original quarter-round shoe molding. This shoe molding remains intact on the basements in the Quartermaster's room. These baseboards step up and continue around the perimeter of the dias platform.

Walls

The walls throughout the building are finished differently based on location. In the ground floor garage space the walls are exposed brick masonry with variously layers and campaigns of painted finish. On the south wall near the exterior door and window near the southwest corner, there are remnants of a plaster finish applied directly to the brick surface. It is not surprising that without any climate conditioning and

with the extent of roof drainage issues on the exterior side of this wall that the plaster finish has not survived. Similarly the paint coatings on the exterior walls are exhibiting failure and loss of adhesion with extensive cracks, alligatoring and peeling. Without interior conditioning, perimeter masonry walls are subject to constant fluctuations in temperature and dampness and make it difficult to maintain a finish. The extent of peeling paint however gives a glimpse of the number of finish campaigns over the past century and a half. Paint ghost lines also provide evidence of locations of shelving, utility equipment and changes to masonry openings. The garage space is currently painted with a horizontal division of the walls with the lower four feet painted one color and the upper half painted another. The jail cell room in the south ell has a plaster finish applied directly to the brick walls that is for the most part intact. There are cracks in this plaster, bulges/delamination, and extensive peeling of many paint layers. Despite the extensive brick failure on the exterior of the west wall, there is no evidence of extensive water damage aside from the loss of the plaster finish closest to the northwest corner.



Figure 24: View of garage space east wall finishes – painted brick.



Figure 25: South wall of garage space showing remnant plaster under window.

The small toilet room under the stair run in the stair structure has an exposed brick wall on the west side while the east wall has lapped wood board sheathing partially covered with gypsum board. It is clear from the finishes that this location for a toilet room was a later after-thought.

Heading towards the second floor, the stair structure is finished on the interior with the exposed brick wall on the west and horizontal beaded tongue and groove boards on the north, east and south walls. All the stair structure walls, whether brick or wood are painted gray and the paint coating is in fair condition with some minor peeling or paint loss.

The walls of the main second floor assembly space retain their original plaster finish. The walls are finished with a carved wood cyma crown molding and a frieze band created by two picture rails separated approx. 12-14 inches. All the wall components – both plaster fields and molded trim elements – are painted the same color. This paint finish is exhibiting typical conditions related to an unheated space; crazing from expansion and contraction, lifting, peeling, and large scale delamination. It is unclear if the plaster is applied to a lath system over furring strips suggesting that this space was designed to be conditioned and thus preventing large scale plaster damage compared to plaster applied directly to the brick exterior walls which would have resulted in more finish damage. The area of the greatest plaster damage is around the narrow chimney breast on the east wall. The chimney breast creates what looks

like a pilaster with the frieze band approximating a “capital.” This area has extensive plaster loss, efflorescence and paint loss. The brick that is visible beneath appears to also have spalls, confirming that this damage was caused by water infiltration, possibly before the roof was replaced. There does not appear to be active water leaks, but the high concentration of hygroscopic salts (efflorescence) will continue to cause the plaster to disintegrate when interior humidity fluctuates to extremes. This view of the brick behind the plaster also does not reveal the presence of any wood or metal lath leading us to suspect that the plaster in this space is in fact adhered directly to the exterior masonry walls. Where the paint finish has delaminated near the chimney breast on the east wall, older paint colors of deep, rich hues are visible. It is clear that the various sections of the walls were painted differently and that the current color is at least the third or fourth layer.

The Quartermaster's room in the south ell also has plastered walls, although more likely on wood lath and wood framing with the exception of a small portion of the north wall where it overlaps the older main brick building. The plaster finish in this room is in much better condition with very few cracks, delamination or paint failure.

The small bathroom in the front section of the stair structure is finished with lapped sheathing boards with a painted finish on the three outer walls and painted brick on the west side. These walls are in fair/good condition to the extent they were visible.

Ceilings

As with the walls, the treatment of the ceilings throughout the building were handled differently based on location. In the ground floor garage space the ceilings are finished with a pressed tin/sheet metal systems tacked in place up against the bottom edge of the floor joists. This ceiling treatment is not only indicative of the construction period in the 1870s, but was also considered to be a fire-proofing method for separation between the garage use on the first floor and the assembly use on the second floor. There are a number of areas where this metal covering has been damaged either through insensitive penetrations or from rust/corrosion due to water leaks. Along the rear wall (south) there are two torn holes in the pressed tin and surrounding rust on the sections still secured. This area coincides with the area of extensive water damage and ineffective roof drainage on the south wall. Looking at the ceiling from the large garage door opening rust lines on the ceiling help to distinguish the panels of the pressed tin. Near the center of the garage space, an area of tin has been peeled back where there is extensive rust, exposing tongue & groove floor boards above. There are also soil lines stretching across the tin ceiling walls indicating the location of previous plumbing or electrical conduit lines. There is a simple wood trim/fascia board that covered the seam between the ceiling and wall planes that is in fair condition, but does not appear to be original. Along this upper corner, especially on the east wall, is where a number of pipes and conduit tend to be run



Figure 26: View of intact section of pressed tin ceiling in garage space.



Figure 27: View of pressed tin ceiling in garage space showing rust at panel edges.

connecting the old electrical and water services to those spaces located on the second floor. Despite the number of existing penetrations and small tears from fasteners or the running of wires, this ceiling finish which is more than 100 years old is in good/fair condition and should both be retained and refinished.

The ceiling in the old jail cell appears to be plaster on lath and is in fair condition with a few cracks. The ceiling in the small bathroom space in the stair structure consists of gypsum board panels without a painted finish. As noted in the wall section, the ceiling of the staircase to the second floor is finished in beaded tongue & groove boards with a gray painted finish. This paint finish is exhibiting significant failure with much peeling and flaking.

The ceiling finish in the second floor assembly hall is the most ornamental of all the spaces. It is finished with a series of decorative beaded tongue & groove board panels trimmed by molded frames with turned drop finials or corner blocks. These ceiling boards which run in diagonal patterns in the centermost and corner panels and perpendicular to the walls at the perimeter all have a stained and varnished finish, including the trim boards. There is some extend of loose, cupped or shifted boards creating an undulating plane, but for the most part this ceiling is in good to excellent condition and should be considered simply for reinforcement and minor refinishing.

The ceiling in the Quartermaster's room in the south ell appears to be finished either with plaster or gypsum board. There is a very small molded trim piece around the perimeter at the crown molding position and the ceiling in general looks to be in good conditions with only minor paint damage.

Systems

As noted there are currently very little existing and operation services or utilities functioning with the building. There is a small electrical service that provides basic lighting and operation of the garage door opener. The service enters the building from a utility pole at the northeast corner of the property with a line mounted to the frieze on the north wall of the stair structure then traveling within a rigid metal conduit down the inside corner of this wall before turning inward. The electric meter for this service is located on the brick wall within the stair structure near the lower landing at the north end. It appears to be hooked up to an old fuse box/panel. Active or electrified lights appears to include a flood-type light on the inside of the north wall of the stair structure over the doorway



Figure 28: Beaded board ceiling & walls in Stair structure.



Figure 29: Patterned beaded board ceiling in second floor hall.



Figure 30: Electric meter & fuse box.

(operated by a toggle switch on the east wall), an overhead/ceiling mounted bare bulb fixture near the upper landing of the stair (also possibly operated by the toggle switch on lower east wall), a central bare bulb fixture mounted to a decorative block in middle of patterned ceiling in second floor assembly space (possibly operated by push button switch on east wall of room), two ceramic pendant bare-bulb fixtures hung from decorative block over raised dias at north end of second floor assembly space, a bare bulb ceiling mounted fixture in second floor bathroom/closet with pull chain switch, a ceiling mounted 2-bulb fluorescent fixture in the Quartermaster's room (also with a pull chain switch), and two bare-bulb fixtures in the garage space, one on the east wall and the other mounted on the ceiling near the south half of the garage space. There is also one exposed bulb on the ceiling mounted garage door opener. Most of the wiring appears to be the BX-type exposed wiring with metal flexible casing with surface mounted electrical or junction boxes. There are four abandoned older toggle switches mounted to a wood board on the brick wall between the doorways to the old jail cell and the exterior door to the south yard. These switches are connected by abandoned conduit that led to a junction box mounted to the wall above near the ceiling and then with more wires penetrating the floor to the second level and through the south brick wall to the exterior. There are very minimal existing early switches or outlets that are recessed in wall surfaces, likely both because of the solid masonry wall construction and minimal interior partitions, but also because the building predates the common use of electric wiring. Rehabbing this building for modern functions will require very careful and sensitive design and execution for introducing new electrical wiring, chases, and fixtures. Likewise, the extent of abandoned wiring and fixture will need to be further assessed and plans made for careful removal.

Similarly, it appears despite the original function as a fire station, this building had and continues to have minimal water or sewer services. It was unclear where the original or current water service enters the building as there was no visible meter or valve. There was a pipe that appeared to enter the building on the south wall under or near the threshold of the rear exterior door in the garage space. Two galvanized steel pipes rise from the floor about 20-24" before turning 90 degrees. One includes a shut off valve before the turn. The other leads to another vertical pipe that includes a shut off valve and appears to run to the exterior on the other side of the south



Figure 31: View of abandoned wires, conduits & junction boxes.



Figure 32: Example of abandoned plumbing in jail cell.



Figure 33: Circa 1930s toilet in bathroom under stair.

door. The horizontal pipe leads toward the jail cell and includes a riser with a spigot/faucet with a pressure gauge above it. Another pipe runs along the floor to the east at the corner tight against the wall before turning north along the north wall, tee-ing off through the brick wall to the ground floor bathroom and then turning up the middle of the east wall and through the ceiling. It is clear that this pipe once fed the small bathroom on the second floor of the stair structure. Water lines also turned into the jail cell along the west wall with a single faucet positioned about 24" above the floor and with a vertical pipe riser up in the northwest corner, then across the ceiling and then turning up through the ceiling to the Quartermaster's room above. A drain pipe rises vertically along the north wall of the cell to the east of the entry door. There is also evidence of a drain hole for a toilet in the northeast corner of the jail cell indicating that this space once included a toilet. In the first floor bathroom space under the staircase, there is a visible exposed drain pipe, but no exposed water supply lines for the toilet that exists against the north wall. It is likely that this north wall has a cavity behind it which conceals the plumbing. Despite the presence of these pipes, there is no evidence of a water heating source or that there is any active water service. None of the piping is copper or PVC, so it is likely that this plumbing was installed as late as the 1930s and very little if any upgrades have been made. As with the electrical services, any plans to rehab or upgrade this building for new functions will require thoughtful design and planning to install plumbing services to both meet modern day building codes, but to do so in a way that minimizes the visual and architectural impact on the building.

Lastly, there are no existing fixtures that indicate how if at all, this building was heated with the exception of the two chimneys. There are no radiators, fireplaces or stoves intact. It is possible that based on physical evidence that originally a small coal stove was located along the east brick wall of the garage space with a stove pipe exhausting into a hole and into the chimney that rises along the east roof parapet. A square sheet metal plate located about 6-feet up the east wall is likely covering this stove pipe hole. There does not appear to be any evidence of a similar stove on the second floor, however, it is possible that a grate through the floor may have provided residual heat to this upper space. The chimney on the south wall remains more of a mystery as it is clearly a later addition. Research of historic Sanborn Insurance maps indicate that by 1910, a 1½ story structure had been built behind the southwest corner of the building flush with the rear (south) wall of the south ell. It is likely that the brick chimney attached to the south wall of the main building was constructed around the same time and that perhaps this structure served as a small boiler room. This explains the way the water pipes branch out and under the doorway in this area. A minimal number of radiators could have been installed and used at the first and second floor rooms if this were the case. These maps also indicate that the second floor room over the south ell (the Quartermaster's room) was not added between 1924 and 1944.

III. Treatment and Repair Recommendations:

Exterior

Repairs and treatment to the exterior of the building assumes that not only is it the intent to keep the building weather-tight and secure but also to retain all the historic/architectural character that current exists as well as to consider ways of restoring character-defining elements that have been lost. It is strongly recommended that an overall master plan for the restoration of the exterior be developed that incorporates a plan for its use. Often times, changes will be dictated by Building Code requirements as they relate to how a building is occupied or used. These changes need to be considered in conjunction with long-term restoration plans, so that one effort does not negatively impact the other.

Brick Masonry Repairs:

- Grade along the north and east sides should be pulled back slightly with curbing, sidewalk to entry doors and with crushed stone against foundation walls.
- Raking crack on NE corner pier to be inspected by structural engineer to assess full cause and design repair. Likely caused by ground settlement and changes in masonry openings related to modern garage door.
- Openings in foundation wall on west elevation where bricks have become dislodged should be carefully infilled with new masonry units and mortar.
- Exterior applied brick chimney on rear (south) elevation no longer serves a purpose and yet is conducting water down face and into wall. Chimney should be carefully dismantled, brick salvaged for reuse or repairs.
- All vegetation attached or within 18" of the masonry walls should be removed including roots. This includes climbing vines and trees up the south wall of the building. Care to be taken in pulling off or removing vines from brick surfaces, as roots or tendrils may have secured themselves deep within mortar joints and can cause brick to pull out.
- Any wood elements or metal anchors/fasteners applied to the surface of the brick walls should be carefully removed to allow for thorough repointing of the walls.
- Outer face of south wall to be carefully repointed with new brick units pieced in where missing, especially in SE corner and around door opening. West wall of south ell to be carefully rebuilt where brick courses are bulging/bowing outward, bricks have cracked or spalled or are missing altogether.
- Pointing of the parapets walls particularly around the original east chimney is needed to ensure a water- and weathertight assembly.
- Full west, south and east walls of south ell to be repointed with inappropriate mortar (Portland cement) campaigns removed. Pointing mortar to be softer than brick units so as to ensure it won't result in spalling or damage of soft bricks.
- Once brick walls have been repaired and repointed, the painted finish which is cracked, peeled or missing altogether should be carefully prepared and then repainted with a compatible masonry paint system. The exposed diamond shaped tie-rod anchor plates on the east and west walls should be masked and painted a black/grey/brown to call them out both as a decorative and functional feature.

Wood wall repairs:

- The wood walls of the second floor of the south ell and the stair structure on the east elevation are in fair condition, but the wood is nearly bare of paint, with wood grain open and exposed to the elements. The wood clapboards, trim and cornices throughout the building exterior should be carefully scraped of loose paint, down to sound substrate, joints and seams secured with finish nails or trim-head screws, caulked, and primed and repainted with a minimum of two finish coats of quality exterior paint.
- Areas where wood elements (siding, trim or cornice) are exhibiting extensive punkiness or wood decay, or where it is missing altogether, the wood element should be replaced in-kind to match dimensions, profiles, and surface finish. Wood species to match or exceed in durability all sides primed.

Roof, chimneys and drainage repairs:

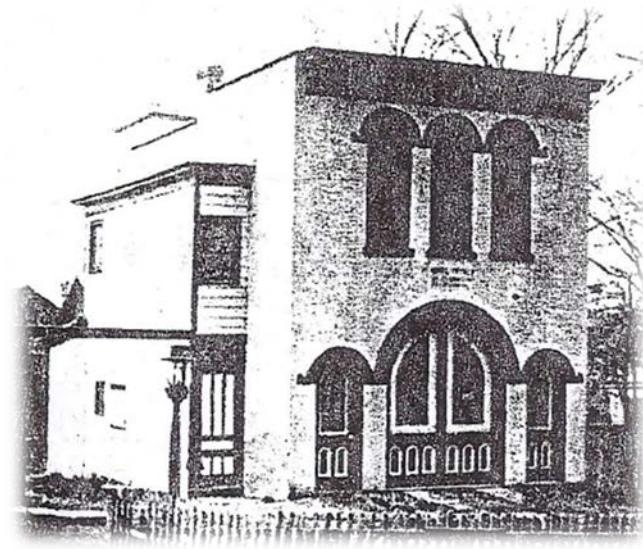
- Regular roof inspections to ensure that seams in the EPDM membrane should be conducted. While the roof appeared to be watertight during our on-site assessment, there are loose flaps or strips of EPDM membrane that were laid over drip edge materials and fasteners that were lifting and were a potential point of enter for water or snow melt.
- Cleaning away debris that has accumulated and resealing or re-adhering lifts or flaps in the seams or installing new fully adhered patches overlapping these seams is necessary to ensure the roof remains watertight and to extend its life.
- With the south chimney that butts up against the back wall removed and the brick wall repaired, it is strongly urged that a new gutter trough be installed along the rear eave of the main roof and along the rear eave of the south ell pitched to downspouts attached to corners and with extension pipes to deposit water sufficiently away from the building walls. Managing water and drainage and keeping it off of the walls and out of the building are extremely important.

Cornice Repairs:

- Typical of other wood trim elements, the built-out wood cornices in all locations around the building exterior simply are in need of repairs to the paint finish and strengthening of the wood joinery.
- Where mitered corners at ends of each cornice are separated, opened or exhibiting a gap between wood elements, these pieces need to be reinforced, secured tightly and sealed with silicone-based caulk to prevent any water infiltration that can later lead to wood rot.
- Loose paint should be carefully scraped away down to bare wood or sound substrate, reprimed with penetrating oil-based paint, and given a minimum of two coats of quality finish paint.
- Since all cornices project out from the building wall planes, it is essential to inspect and ensure that the roof covering or flashing that covers the horizontal plane of the cornice is intact and complete and is not allowing any entry of water into this projecting construction. This means that continuous sheet metal drip edges should be securely tack down and providing sufficient "kick" for drips to fall away from the cornice fascia, and that flashing is soundly secured to the wall plane above the cornice projection.

Door Repairs:

- In order to restore the exterior appearance of this building, it would be important to reinstate the two south facing doorways with historic wood paneled doors in their original openings. The door to the main garage space on the south wall appears to be intact, but is damaged and would need to be repaired with new glass (preferably tempered to prevent easy breakage), new operable hardware and wood repairs and painted finish.
- The door on the south wall to the old jail cell was likely a solid paneled door and could easily be replaced with a salvaged historic door dating to the early 1900s. Depending on how this south ell space is used/program, this door would be equipped simply with panic bar hardware and would not be operated from the exterior.
- The two stair structure doors are the most regularly used, but have been altered. Historic photos indicate that the front facing stair structure door which provided access to the stair and the second floor was originally a solid wood 7 paneled door with three upper vertical panels, three lower vertical panels and a single horizontal panel at the lock rail position. This design reflects the 1870s construction date and architectural style, yet would have been secure enough to prevent break-in or vandalism. Currently this doorway consists of a plywood door
- The door at the east side of the stair structure which provide access into the ground floor appears to have originally been a window opening, rather than a door, since the front façade would have include two entry doors in additional the vehicular doors. It is unclear when this alteration was made. Currently this doorway consists of a new modern fiberglass or aluminum pre-hung door for security purposes. It would be prudent to consider reconfiguring this opening if the south wall entry doors or even the front doors were reinstated.
- Regardless of repairs or appropriate replacements, it would be recommended to have a comprehensive plan for hardware upgrades related to secure locking mechanisms, master keyed.
- Interior historic doors are in good condition and simply require paint refurbishment in conjunction with finish repairs in each space. Most doors include original/historic rim locks, hinges with pins and ceramic knobs. These should be carefully retained, repair or cleaned up where necessary. Replacement parts can be found at local architectural salvage shops where needed.
- As noted, the front elevation of the building was significantly different when first constructed. The ground floor of the north façade consisted of three consecutive arched openings. The center arch was broader and taller to accommodate two hinged garage/carriage-style doors for the first engine. One each flanking side were narrower, shorter single-leaf entry doors. All four doors had the same design with half-round tops, undivided upper panels, and multiple recessed vertical panels at the lower half (two on each entry door, and three on each of the carriage doors). The flanking doors appear to have glazed upper panels to allowed natural daylight into the ground floor space. When this was altered in the mid-20th century to accommodate larger, modern fire trucks, the arched openings were eliminated and replaced with a steel header and squared opening.



- If the intent is to restore this historic fire station for community/public programming purposes, it would ideal to reinstate the original arched door openings to match the second floor windows and replicate the design of the original doors. Sufficient photographic documentation exists to facilitate this design and restoration. Similarly based on interior programming of spaces, a case could be made to restore the configuration of the east wall of the stair structure with windows where they were once located.



Window Repairs:

- Most all of the windows require some extent of repairs ranging from basic removal of deteriorated putty, reglazing and new paint finishes to full glass replacement, reinforcement of stile/rails/muntin joinery and new finishes.
- It is fortunate that the building retains most of its original and later addition window sash although most have been covered over with plywood. Every effort should be made to further retain and restore them, and ideally they should be uncovered so that they can be seen and appreciated as important parts of the historic character of the building. If security/vandalism issues are a concern, then new exterior wood storm windows with tempered glass can be installed to both protect and accentuate the windows.
- Where the double hung window on the second floor south wall is missing, the 6-over-6 double hung window directly below on the ground floor would serve as a model for either replicating or finding a salvage pair of sash to reinstall. Similarly there are missing sash on the east and north walls of the stair structure. It appears both the upper north wall window and the upper east wall window would have included a 6/6 double hung sash according to historic photos. There are some loose sash stored in the second floor bathroom but it is unclear where they came from.
- Energy conservation upgrades can be employed to improve their efficiency. This would include new weatherstripping at the jambs, meeting rails, head/sill rails and operable locks that secure sash in closed position. Additionally interior (on front windows) and exterior (on rear and side windows) storm sash can be installed to further arrest air infiltration, but also to add increased protection of the windows.
- Generally, all the windows will require new paint finishes on the exterior surfaces at least. It would be recommended to think about the overall historic character of the building's exterior and plan for a color palette for exterior painted surfaces that reflect the building's period of significance or historic architectural style. Stripping and prepping the front windows for new glazing putty and repainting is likely to uncover various paint layers and colors. The color closest to the wood on the exterior face could be used to guide and determine the color palette for the windows throughout.

Interior finish repairs:

For the purpose of repairing the interior spaces of this historic building, it is important to first start with some conceptual planning as to how the building and spaces will be used. We strongly recommend that you work with a design team to coordinate the repairs and renovations of spaces with the Building Code

requirements needed for new programming in the building. We feel that this building has great potential to be a valuable and successful venue for public meetings, the Repair Café, offices, etc, but if not conducted in a thoughtful and deliberate way can result in extensive loss of historic fabric, architectural significance and structural integrity. A phased plan for repairs and renovations for new intended uses/occupancy would look at both the conditions requiring repair/refinishing as well as Life Safety, Egress, ADA, and Fire Protection building codes. Given that the building currently has no significant utilities aside of minimal electricity, new use of this building will require running water for operable bathrooms, a heating systems and energy source, and possibly ventilation and air-conditioning. Fortunately, modern systems have become more compact and there are a number of creative means for introducing HVAC, however, this building has no basement or mechanical space to locate new equipment. Consideration of rebuilding a rear addition might be necessary, as this rear SW corner appears to have been the location of past heat sources. Introduction of new or upgrades restroom facilities may trigger the Americans with Disabilities Act with regard to universal access, in which case careful design and planning will be required to meet codes. In any case, employing a thoughtful and comprehensive approach to this planning that will identify building code deficiencies, all possible design solutions and methods for making repairs and restoring the interior architectural character **before** any construction begins is our highest priority recommendation with regard to the interior.

The following are repairs that will be needed and should be coordinated with any building code upgrades or renovations for new use/programming:

- Second floor wood floors have a small number of floor boards that exhibit rot, are cracked, damaged or missing. Care should be made to replace damaged or missing board to match existing original in dimensions (width, length and thickness), finish and species. These new boards should be carefully integrated and pieced in such that when entire floor is refinished, these new pieces blended seamlessly.
- Wood window, door or baseboard trim where missing should be replicated based on nearby existing original pieces and matched in dimension, profiles and wood species.
- Plaster walls on the second floor are generally intact, although there are some areas of raked or settlement cracks and the area around the chimney breast where the plaster is loose or missing. Where possible, the plaster should be carefully repaired, with cracked raked out, plaster buttons used to secure areas of lost keying/delamination or rusted/lath. Reinforcement mesh and bounding agents may be used to ensure sound bond of new three coat plaster and final skim coats should blend with adjacent plaster finishes. It is NOT recommended that holes, areas of lost plaster or cracks on second floor be repaired using drywall.
- First floor walls consist primarily of painted brick on the west, east and north wall, while the south wall has evidence of past plaster finishes. Loose paint on brick walls should be scraped, wire brushed or otherwise removed in a method that does not cause damage to the brick. These walls should be repainted with paint compatible with masonry substrates to ensure breathability and to prevent future failure or paint or brick.
- The south wall of the first floor garage space as well as the south ell jail cell once had plaster finishes. It was also on these walls that electrical and plumbing lines were run or attached. For this purpose, it would be advisable to either re-plaster these walls or to install furring against brick, rigid insulation and new drywall finishes in order to provide some extent of insulation and the ability to either conceal, channel or anchor new plumbing or electrical conduit.
- The pressed metal ceiling in the ground floor space is an important architectural feature of this building, both reflecting the period of construction and decorative finishes of that time as well as a creative approach to providing what was considering a level of fire proofing between the floors. While there are areas of rust and damage, this ceiling is a series of sheet metal panels. Once utility upgrades have been planned and laid out it is possible that where a mechanical chase or

soffit is planned, intact sheet metal panels can be carefully removed and used to replace the areas where damage has happened. Extreme care should be used in penetrating through these panels for new wiring, plumbing runs, locating ceiling lights, etc. Ultimately this pressed metal ceiling should be cleaned of any rust, peeling paint, carefully primed with a rust-inhibiting primer and repainted with finish paint compatible with metals.

- The beaded board wood ceiling in the stair structure should likewise be retained, with loose boards carefully resecured and all loose and peeling paint scraped down to bare wood or sound substrate before being reprimed and painted.
- The varnished decorative beaded board wood ceiling in the second floor hall space is excellent condition and simply need to have a few boards resecured. As with the wood ceiling in the stair structure, any new wiring or placement of ceiling mounted lighting fixture should be carefully planned so as not to damage this historic feature.

V. Suggested Prioritization

Recommended & Prioritized Next Steps:

1. ***Addressing the Exterior Appearance***

The most extensive and highest priority work relates to the masonry at the rear of the building and the painted surfaces throughout the exterior and interior of the building. At the south elevation in particular, all vegetation attached or within 18" of the masonry walls should be removed including roots and the climbing vines and trees up the interior corner of the building. Care must be taken in pulling off or removing vines from brick surfaces, as roots or tendrils may have secured themselves deep within mortar joints and can cause brick to pull out. At this time, the south chimney should be removed and then the south wall carefully repointed with new brick units pieced in where missing, especially in SE corner and around door opening. Likewise the west wall of south ell will need to be carefully rebuilt where brick courses are bulging/bowing outward, bricks have cracked or spalled or are missing altogether. Once the brick walls are pointing and sound the paint finishes can be added. Paint finishes are intended to protect their substrate by preventing water infiltration and keeping the weather elements out. All surfaces throughout the building, whether brick, wood, sheet metal or plaster are exhibiting varying levels of paint failure both because of long-term deferred maintenance and lack of climate control.

If funding becomes available for a targeted project, then it would be advisable to begin paint finish repairs, after repairs to masonry have been made. It would first be necessary to work with an Environmental Hazards testing company (Alpine, Ambient, etc.) to first identify the possible presence of lead-based paints so that the scope of work for the painting project could be accurately defined. Without accurate records of past exterior work, it is assumed that full removal of lead based paints has not occurred). Addressing the paint finishes elevation by elevation as funds allow is a way to demonstrate to the public and future funders that restoration efforts are proceeding and will establish the methodology and materials (including color palette and level of craftsmanship) as well as the vision for the final product.

2. ***Weathertight Repairs.***

While masonry repairs and painting the exterior walls are a first step in making the building more weathertight, the entire exterior envelope needs to be addressed methodically. Redoing paint finishes is only successful if the control or shedding of water has been addressed. The cause of so much masonry damage and vegetation growth on the rear/south side of the building is because the water from the roof has not been properly drained away from the building. With the south chimney removed, (at a minimum to below the roof line) a new gutter drainage system can be effectively installed, connected to downspouts, preferably on the SW corner to deposit water sufficiently away from the building walls. Likewise a new gutter and downspout on the south ell is necessary. Once installed, the south walls of the building should remain dry regardless of the extent of rain or snow melt, and will protect the newly painted finishes. Making the envelope of the building weathertight includes reinforcing and closing gaps in wood trim, in the clapboard siding on the stair structure, and making sure that any open seam in the EPDM roofing is sealed and secure. This includes the careful repointing of the east wall under the original chimney, and capping the chimney to prevent rain water from entering. Lastly, any broken window panes or window openings missing sash should be repaired. A sealed envelope that properly sheds precipitation out and away from the building will prevent wood decay, paint failure and wash out of masonry pointing. Once completed, it is required that the envelope is monitored regularly for any breaches and minor preventative maintenance be continued.

3. *Planning Future Use/Occupancy.*

While this study and report looks carefully at the existing conditions and those historic elements that contribute to its historic character and significance, a separate study is necessary to work with Town leaders to envision how this property can be put back into active use as a community resource and asset. This building offers approximately 600 square feet in each of its large opening spaces in the main building and 100 square feet on each floor of the south ell. While the stair structure is primarily dedicated to circulation space, it could provide necessary storage or mechanical space. Therefore, at 1,300 square feet of usable space, it would be beneficial to work with a design team and a town committee to study the feasibility for reuse of the building and the related upgrades that would be required per corresponding Building Codes. This feasibly study and resulting Master Plan could then be integrated with this Condition Assessment and Repair Recommendations to plan phases and fundraising strategies.

4. *Introduction of New Utilities.*

Subsequent to identifying a planned use for this building and life safety/egress code upgrades, the next prioritized step would be to involve a design team that includes a mechanical engineer to design the introduction of utilities in a sensitive matter, so as not to negatively impact the historic fabric and character-defining features of the property. While often a mechanical vendor (Electrician, Plumbers or Heating/Cooling contractors) will indicate that they are capable of installing the needed equipment/devices, they generally don't consider all the features and spaces of the building and how their portion of the overall project impacts the whole. For this reason, when dealing with historic properties, it is recommended this work be planned, specified and carefully supervised.

5. *Interior Restoration and Rehabilitation.*

As noted with the exterior, repairing or renewing the interior finishes can be done in multiple phases to accommodate the funding in hand. With new functions programmed for the four key spaces of the interior, the approach to the refinishing of these spaces can be planned. Likewise, as with the exterior, the methodology, materials, approach to new utilities and overall aesthetic can be established and implemented in the first phase or space, setting the example for later spaces. Retention of the greatest extent of original fabric and traditional finishing methods should be a priority and guiding principle. The Secretary of the Interior's Standards for Rehabilitation should be followed as a basis. Simple, traditional finishes provide an elegant and functional background for any new use within this building. Salvaged period-appropriate features such as doors, hardware, lighting, radiators, window sash, plumbing fixtures, etc. are all available locally to help put this building back together without compromising its character and charm.

Each of the five sequential steps noted above allow for forward and demonstrated progress that will avoid having to undo previous work. Each is an opportunity for distinct fundraising opportunities, whether through grants or sponsorship. Each allows for incremental information gathering which is as much an essential part of the process and restoration journey as the finished product.

This historic building has played an important role in the history of the Village of Castleton-on-Hudson and is worthy of recognition and celebration. It should be carefully restored and creatively adapted to continue to be a valuable asset to the Village residents and community leaders. Sitting vacant, deferred of maintenance is not the way to ensure its preservation and contribution to the Village. With priority given by the Village, County and State leaders, it should not be difficult to rehabilitate and function again for another 150 years.