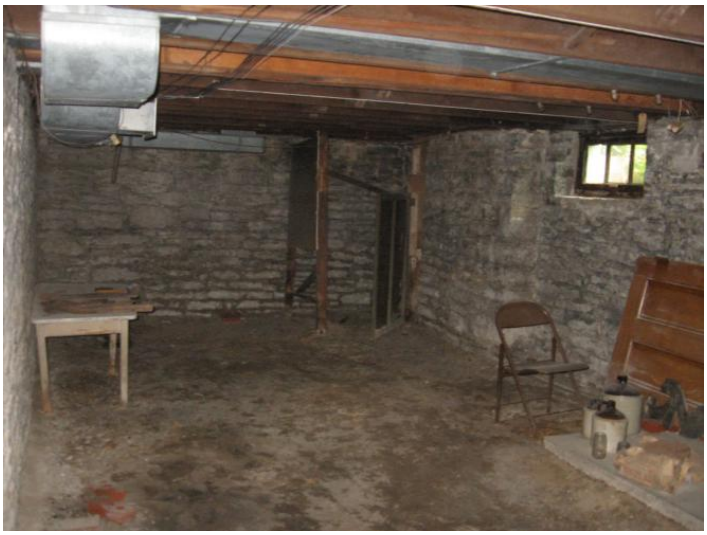


Detail images showing interior view to stone masonry foundation at south dirt floor area, including wood framing and trim members [RIGHT and BELOW RIGHT], and evidence of water infiltration through stone at west center door west jamb [BELOW LEFT].

First level wood floor framing runs north-to-south, while attic level floor and roof framing is oriented east-to-west. It is presumed that second level floor framing also runs east-to-west - this perpendicular arrangement may be the root of stress in the exterior multi-wythe brick masonry.

Interior Stone Masonry - Detail images depicting the condition of stone masonry foundation system, including head of west center door and lintel [ABOVE] to south dirt floor area, and at typical clerestory window head [RIGHT].

Detail images depicting the condition of first floor wood framing members off-set from stone masonry foundation system and bearing on steel clip angle [ABOVE LEFT], and typical clerestory window sash frame [ABOVE RIGHT] and stone masonry jamb and sill opening.

Existing interior stone masonry in lower level [ABOVE and BELOW TWO], and entry door to janitor's closet in lower level [RIGHT] - note low clearance of ceiling to top of modified door frame.

Interior stone masonry wall conditions at the central corridor in the home's lower level suggest that hydro-static pressure has forced ground water through the stone foundation walls (original) and concrete floor slab (ca. 1969) in this area.

Existing ground level utility closet [ABOVE and LEFT] - note deteriorated domestic water heater and detritus on ground. The electric water heater has corroded through its tank, and is no longer serviceable.

Existing ground level toilet [ABOVE LEFT and ABOVE RIGHT]. It appears that hydrostatic pressure has forced ground water through the stone foundation wall and up through the floor slab in this area. It is believed that the below-floor plumbing may no longer be serviceable.

Existing ground level office.

Interior Stone Masonry - Detail images depicting the condition of stone masonry foundation system, including settlement cracking at NE flue base and east wall [ABOVE LEFT and RIGHT].

Interior Stone Masonry - Detail images depicting the condition of stone masonry foundation system, including settlement cracking at north wall [ABOVE LEFT], and view to masonry stair conditions at ground level cellar entry [RIGHT].

Detail images depicting the condition of stone masonry foundation system, including washed out mortar joints and effloresced stone units in mechanical room west wall [LEFT and ABOVE RIGHT]. Note the quantity of detritus on the floor, as well as the rusted base of HVAC equipment.

Exterior Wood Decks, Railings and Trim - Detail images depicting the condition of wood decking, trim, railings, and juncture to brick masonry at east two-level porch.

Exterior Wood Decks, Railings and Trim - Detail images depicting the condition of wood decking, trim, railings, and juncture to brick masonry at east two-level porch. At a minimum, this report would recommend the refurbishment of all wood carpentry items to include new finish.

Exterior Wood Decks, Railings and Trim - Detail images depicting the condition of wood decking, trim, railings, and juncture to brick masonry at west two-level porch.

Detail images depicting the condition of wood decking, trim, railings, and juncture to brick masonry at west two-level porch. It is the understanding of this report that both the east and west porches were reconstructed ca. 1970.

Exterior Wood Decks, Railings and Trim - Detail images depicting the condition of wood decking, trim, railings, and juncture to brick masonry at west two-level porch.

Detail view to typical cornice, column cap and trim area that would be recommended for anti-bird devices to be installed [LEFT].

Detail views showing ground level exterior mechanical room door [TOP RIGHT, BOTTOM RIGHT and BOTTOM LEFT].

View to south showing existing attic conditions - seismic bracing would be recommended to provide additional loading surface for existing rafters at the tops of masonry walls.

Roof Construction - Detail images show the existing roof system at the attic level, including typical double 2x12 beam running from north to south exterior bearing walls [BOTTOM LEFT], and interior masonry conditions at attic level [BOTTOM RIGHT].

Detail images depicting condition of existing insulation in attic level floor joist spaces, sheet metal and other debris to be removed [LEFT and ABOVE] and supply air ducting design with partially insulated risers and main plumbing stack [BELOW RIGHT].

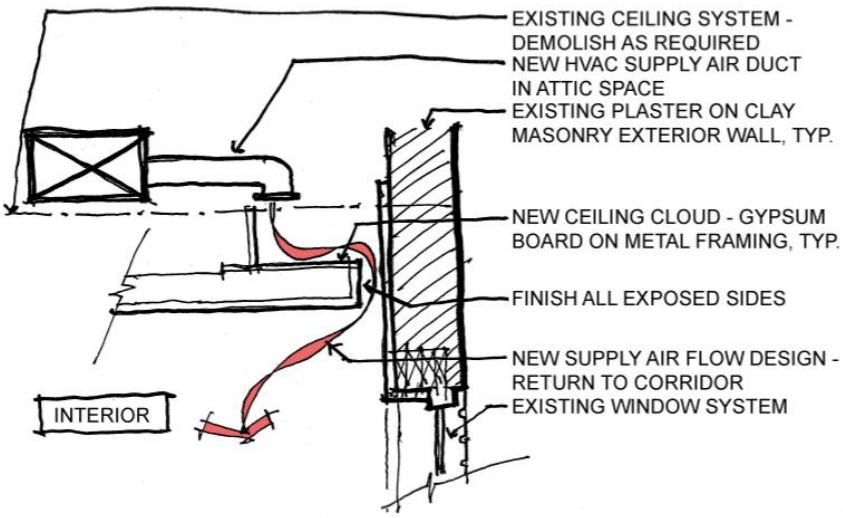
Detail image of obstructed roof hatch from attic level interior - hatch was likely concealed during ca. 1970 renovation work, and would be recommended for re-opening to perform future maintenance and / or roof replacement work.

Roof Construction - Detail images show the existing roof system at attic level, including splice in typical double 2x12 beam running from north to south exterior bearing walls, and interior masonry conditions at attic level [TOP LEFT and ABOVE].

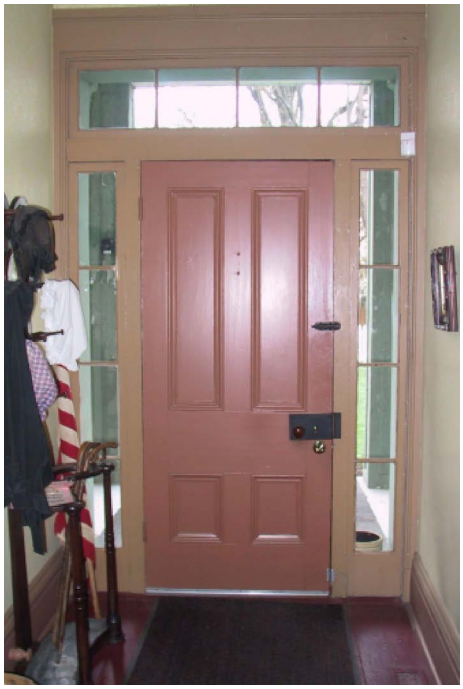
Cracks in existing plaster at 2nd floor (bottom).

Deterioration of plaster at typical interior wall, believed to be due primarily to trapped condensation on sheet metal ducting and from metal supply air diffuser. There are also several cracks and areas of gassed plaster throughout Hanley House's interior which have been caused by structural movement, and by the routine and unchecked infiltration of storm water [ABOVE LEFT and ABOVE RIGHT].

Detail images depicting ca. 1970 steel clip angles at first level floor framing.



Air Flow Diagram - Detail sketch [ABOVE] depicts the proposed renovation design for an HVAC air system. Due to the condition of existing ceilings, and the parallel need for an updated bulding mechanical system, the recommendation of the report would be to construct new clouds in each room that would conceal the existing (deteriorated) ceiling while allowing for installation of new supply air duct. Likewise, the design would eliminate metal diffusers and grilles from various interior walls.



Typical exterior door conditions, at second level interior [TOP LEFT], first level main entry east [TOP RIGHT], and second level entry east [LEFT].

Interior Wood Trim - detail view to typical first level north (south side equal) window casing and trim [BOTTOM RIGHT].

Interior windows and casing to be repaired.

Detail image of interior plaster deterioration, including SW corner of Hanley House on face of flue adjacent to closet [ABOVE LEFT], and typical settlement cracking from corners of fenestration on first level [RIGHT].

Detail views to typical existing furnace [LEFT] and water cooled consenser [ABOVE] units in ground level mechanical room, and existing typical floor drain in mechanical room [BELOW LEFT] for discharge of cooling water. These units are at the end of their serviceable life - it is the recommendation of this report that these units be replaced.

Mechanical (HVAC) Systems - Detail view to existing sheet metal combustion air ducting design [RIGHT] - this is likely to be considered a code violation if the Hanley House is significantly renovated and operated as a museum structure.

Electrical Distribution Panel and Circuitry - Detail view to existing non-code complying panel and meter [LEFT], and abandoned conduit in ground level west wall [ABOVE].

Mechanical (HVAC) Systems - Detail view to existing non-functioning humidifier unit [RIGHT].

Existing duct routing.

Existing duct routing.

Miscellaneous duct conditions.

Miscellaneous duct conditions.

Electrical outlet conditions (above).
Existing HVAC controls (right).

Existing can lighting to be removed, interior (left) and exterior (right).

Existing fire alarm system and egress signage.

Existing domestic water heater (left) and booster pump (right).

Existing roof of Summer Kitchen.

Existing parapet and chimney of Summer Kitchen.

Existing gutter system and downspouts.

Existing gutter system and downspouts.

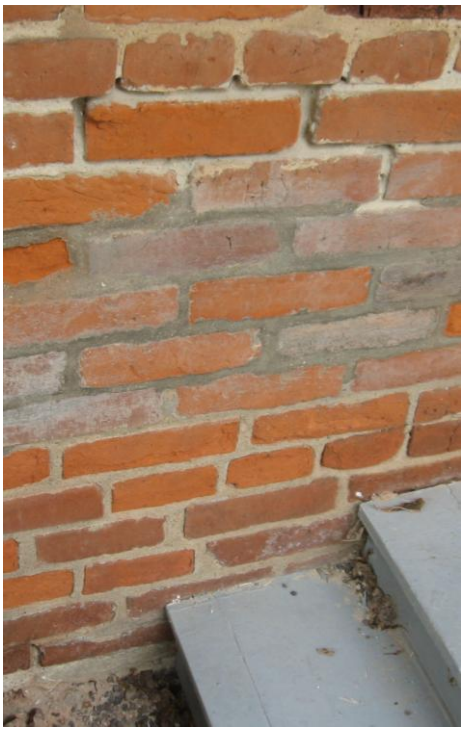
South Elevation Summer Kitchen - Detail image to right shows settlement crack at south end east parapet wall, while detail image below shows typical failed mortar joints at middle SE corner.

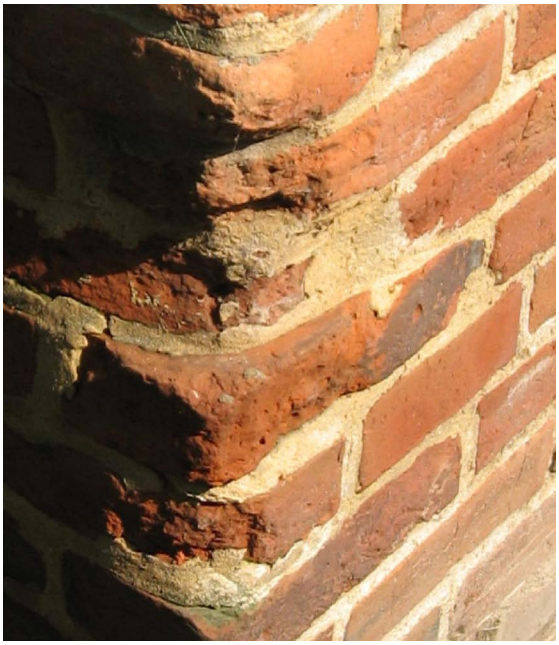
North Elevation Summer Kitchen - Above detail image shows deterioration of clay brick masonry due to impact from lawn sprinkler - masonry units are discolored and joints are failing. Detail image to left shows typical rotted wood cladding at eave and gutter.

Brick existing conditions at Summer Kitchen.

Brick existing conditions.

Brick existing conditions at Summer Kitchen.





Brick existing conditions.

Exterior Windows and Wood Trim - Various images depicting wood shutters in need of repair at the Summer Kitchen.

Summer Kitchen brick mould stops at subsill, which is strong evidence that these and possibly other windows throughout the Hanley House and Summer Kitchen were replaced during the ca. 1970 renovation scope.

Exterior wood door and frame conditions at Summer Kitchen.

Stone foundation cracked and in need of repair.

Stone foundation existing conditions.

Exterior wood deck, existing conditions.

Building Stabilization and Refurbishment Recommendations

This study sought primarily to investigate the existing condition of the Hanley House site through documentation of all building architectural elements, structural systems, and mechanical and electrical systems. The process of examination and analysis conducted at the main house and its outbuilding was then intended to precipitate a list of prioritized recommendations for construction of refurbishment and future capital maintenance.

To expound, the recommendations were thereafter intended to serve as a framework for the Owner as work may be undertaken to stabilize, preserve, and / or refurbish the existing Hanley House and its outbuilding. Recommended work items were each carefully reviewed in the context of potential relative impact on the integrity of the exterior envelope, the priority with which such work would be recommended for execution, and economies of scale which might be present if conducted in conjunction with other scopes of work. Also considered were the types and conditions of existing historic materials and methods of assembly which might dictate what type of replacement or renovation work be performed.

Two specific appendices to the report were generated. Entitled “Assessment Summary” and “Architectural Report”, these appendices provide a consolidated listing of all recommended scopes of work in explicit fashion, denoting units, line-items and sub-line-items, location of proposed scope of work, estimated cost, and recommended priority of importance.

The portion of report which follows is intended to dissect particular aspects of recommended scopes of stabilization work - these issues and aspects are items whose execution is deemed critical to the longevity and integrity of the Hanley House site, but which might be accomplished in a spectrum of manners and at a variety of cost. As such, the following comparisons and contracts are believed to merit additional discussion and consideration by the Owner.

Roof System

The original roof system on the Hanley House appears to have been a heavy cedar shake on split sheathing. (Although access to underside of the Summer Kitchen roof was not possible at the time of this report, the structures being built immediately adjacent and concurrent suggests that both would have had the same roof system and finish.)

In ca. 1970, when the site was refurbished, it appears that an alternative roof system was installed on the main house. (From outward appearances, it is presumed that the same alternative roof system was installed at the outbuilding). Maybe out of fire-resistance concerns, or perhaps simply to stave off the maintenance and upkeep required by a wood shake roof, the use of a composite tile (Bel-Air by Johns-Manville Co., an asbestos-cement tile) necessitated the bolstering of roof framing and the addition of new structural members in order to carry the increased roof system load (more than twice that of the original wood).

It should be noted that, although indirectly related to the roof, the cracking of interior plaster at corridor walls on the first and second floor levels is attributable to the ca. 1970 added structural members, which placed a load on the tops of these partitions but provided no column or other mechanism to transfer the weight of the roof downward to the foundation.

Roof System *cont'd*

In order to more closely match what appears to have been the original material and design, to align with historical and stylistic integrity, and to comply with the applicable building codes, this report initially sought to recommend a heavy cedar shake roof for replacement of the existing asbestos-cement tile roof.

Such a replacement roof system would provide an attractive and authentically rustic appearance, and would offer additional benefits such as increased attic level ventilation, alleviation of roof weight loading on interior corridor partitions (and so the ability to repair the plaster), and use of a fire-resistive roof system to offer greater protection from incidental fires.

1. Heavy fire-retardant split cedar shake - *as recommended - see appendix*.

Nonetheless, alternative options to consider for roof system replacement include:

2. Medium fire-retardant split cedar shake - *see appendix; similar to the heavy shakes, this design would be code compliant, but would create a more uniform (and therefore less authentic) appearance at the wood shake edges*.

3. Vermont S-2 green slate roof - *see appendix*.

Although the slate finish roof would offer the longest relative lifespan of the three roof systems, it would be the least appropriate (of the above options) in terms of matching what is believed to be the original roof design. That being said, cedar shake finish roofs can last for several decades if properly maintained - they require adequate ventilation, proper installation (spacing of shakes and types of fasteners, primarily), and replacement when individual shakes become damaged or fail.

Per options no. 1 and 2 above, it should be noted that a ventilated, modern cedar shake design would provide markedly increased longevity when compared with a traditional design - on the order of 25-65% added life. Whereas a typical cedar shake design (see diagrams section 4) might provide 25-30 or more years of (warranted) life, a ventilated, modern shake design might provide 35-50 years of (warranted) life. Cost for a ventilated system would also be higher, due to increased roof framing material and labor to create additional air flow - these added costs might be 15-30% over and above the cost of a typical cedar shake finish roof system.

Also, as posed by the Hanley House Council, a composite (asphalt) shingle roof finish system would likely be only 12-18% of the comparative typical cedar shake system.

In order to further compare each of the various roofing options, a relative, pro-rated rough order-of-magnitude cost for each type of roofing system is included below:

1.	Heavy fire-retardant split cedar shake - *as recommended*	$ 87,757.73
2.	Medium fire-retardant split cedar shake -	$ 84,864.62
3.	Vermont S-2 green slate roof -	$ 105,598.59
4.	Laminated composite asphalt shingle -	$ 15,796.39

Sheet Metal Flashing, Gutter and Downspout Systems

Part and parcel to any scope of roof replacement at the Hanley House site, it would be advisable to verify and repair the gutter and downspout, and sheet metal flashing systems. The logic being that the new roof would far outlive the existing but older flashings. When a leak or fault would develop in the future, it would be somewhat indistinguishable whether the penetration of storm water was due to deteriorated flashings or failed roof materials (or both). Assuming a well-installed and maintained roof system, more than likely a leak or fault would be due to the flashing no longer being serviceable. The cost and ease of replacing the flashings while the roof is being replaced make this a recommended scope of work.

Unfortunately, the degree to which repair might be required on the sheet metal gutter and downspout is difficult to establish without some destructive demolition. So, for purposes of this report, and after multiple observations during various weather conditions, a more conservative approach has been taken: the recommendation is based on assuming a full replacement of the flashings at the roof and masonry parapet wall, measurable repair to the box gutter, and full replacement of the round-pipe downspout system (to include relocated seams and installation of concealed clean-outs at each side of the main house and outbuilding).

The storm water collection boots would also be recommended for refurbishment. At a minimum, this would accomplish a scoping and clearing of all underground storm water collection lines, but could be expanded to remove and replace the clay boots.

Exterior Windows and Doors

The condition of exterior windows and doors at the Hanley House site suggests that corrective action be taken soon in order to avoid continued deterioration of individual components, and catastrophic failure on a unit-by-unit basis. Multiple viable options present themselves, in order to deal with windows, and secondarily with the reduction of UV-light to the building interiors.

Contemporary construction methodologies offer the opportunity to replace windows and doors to match existing units in all respects. New window units could simultaneously present renewed life and exterior appeal to the home, as well as the ability to improve insulating and functioning aspects of building fenestration, thereby lowering consumption of resources due to reduction of energy lost through glass.

That being said, the original method of fabricating and installing windows from ca. 1855 is virtually unchanged in more than one hundred and fifty years, and could still be used to remove, conserve, and re-set the existing windows in place.

1. Remove, conserve, and re-set existing windows - *as recommended, this would likely include replacement of several window units in their entirety, since the condition of windows on the south side first floor level in particular are rotten past the point of conservation.* $ 246,200.91

Alternative options to consider for the Hanley House site windows include the following:

2. Remove and replace existing windows with new - *see appendix*. $ 275,470.00

3. Re-glaze existing windows as required and apply UV film - *this would mainly be a temporary measure that would only serve to delay to complete failure of individual units.* $ 7,930.68

In order to better compare each of the various options for renovations to window and door systems, a relative, pro-rated rough order of-magnitude cost for each type of window and door system is included with each alternative heading.

Recommended scope of work to preserve the Hanley House site doors:

4. Remove, conserve, and re-set existing exterior doors - *as recommended.* $ 45,630.79

An alternative option to consider for the Hanley House site doors:

5. Remove and replace existing exterior doors with new. $ 33,073.88

At a minimum, it is suggested that efforts be undertaken to address window and door conservation at the Hanley House in piece-meal fashion. Although the cost of the work if performed in batches over several years would likely be subject to a premium (due to mobilization costs, discontinuity, work load fluctations, and even inflation), the benefit would far outwight the cost in terms of preserving existing window units which are in most urgent need of repair.

1-ALT Remove, conserve, and re-set existing windows - *as recommended, and per no. 1 above but executed in four phases over four years - assume a 25% premium if contracted up front with single window conservator.* $ 307,751.14

Exterior Clay Brick Masonry

The basic structural design of the Hanley House is quite typical for its location, origins, style of architecture, and era of construction. Interior floor and roof framing is wood dimensional lumber; the framing runs either north-to-south or east-to-west (depending on the floor level), and bears on the outside walls.

Exterior bearing walls are in turn constructed of clay brick masonry, and are multi-wythe (meaning that they are more than a single-brick - or wythe - thick). The brick units at the Hanley House appear to be mostly original, with some areas demonstrating a partial infill of replacement brick and / or mortar over the past 150-plus years. The brick units which are visible on the building exterior and in the attic level interior also appear to have been hand-made and fired, a process which inherently creates a variation in brick size, color on exterior (fired) face, and durability. It has further been mentioned by Hanley House Council members that the home's exterior brick is alleged to have been manufactured on site, from a clay vein on the Hanley farmstead.

The exterior walls as erected are primarily in sound condition, with no (intentional) cavity for water to drain through between the exterior surface brick and next wythe in from exterior. The original flat row-lock lintels and tie-back courses are evident in most places throughout the exterior elevations, although on the east main entry side of the main house structure a wood timber lintel design was used over six of the eight window openings. The timber lintels on the east elevation apepar to be intact but also appear to be incapable of carrying the masonry dead-load bearing directly on them. The typical exterior (exposed) wythe brick field is composed of a standard running bond with tie-backs at every seventh course.

Typical for its era of erection - but not in alignment with contemporary construction practices - window units themselves throughout the two structures appear to be doing all of the work to support the brick masonry of the wall above, rather than having a lintel of some sort provide structural relief. It is possible that the windows (other than on the east facade of the Hanley House, where wood timber lintels are clearly visible) have a concealed wood lintel, but from the appearance of the sagging, bowed, and cracking flat row-lock heads, it is likely that any original lintels have failed long ago. And, several windows (on the south elevation at First level windows, and at the north elevation at Ground level windows) have had a steel angle lintel installed and painted for concealment, suggesting that this deterioration has been on-going and noticeable for some time.

Over time, efforts have been made to tuckpoint large and small areas of clay brick masonry (as evidenced by the high points areas and top of parapet on the south elevation, and several spot areas of new mortar throughout). Likewise, several portions of brick and mortar - particularly between first floor level window heads and second floor level window sills - have clearly been removed and replaced with modern, machine-made brick and different mortar.

There remain, however, several areas of concern. At the Hanley House, there is evidence of rotation or torsion in the exterior walls, possibly caused by wood floor framing which runs in two different directions, and which may have little or no room for expansion against the clay brick walls. Particularly obvious at the SW corner of the main structure, there is a similar condition at the NE corner of the same structure, with lesser but similar conditions again at the east facade of the Summer Kitchen. To compound this issue, there appears to be a differential settlement occurring at various points along the stone foundation.

Exterior Clay Brick Masonry *cont'd*

There are also portions of the main home and its outbuilding which appear to have been adversely affected by routine impact from lawn sprinklers, and / or lack of adequate drainage from the attached wood porches, windows, trim, downspout attachments, etc.

The significance of all these exterior clay masonry wall issues is that, once storm water is able to infiltrate a wall through a small fault, it can do large amounts of damage. Frequently, this damage goes unnoticed until an even bigger problem arises, as in the case of water that is able to collect, then freeze-and-thaw repeatedly inside of a brick cavity or in a multi-wythe wall. This action is unseen on the outside of the wall until the destructive force of the water (as liquid) has rotted the bricks, and broken and pushed them (as a solid) out of the wall.

Recommendations for the Hanley House site masonry include:

1. New steel lintels at east facing windows with timber lintels - *this would include removal and replacement of various cracked brick units, and new infill brick to conceal the steel angle lintel; all outward appearances would remain the same as currently exist.*

2. Cut-out and install sealant at settlement cracks and faults at SW, NE corners

3. Cut-out and tuckpoint / repair the parapet and high-points clay masonry

4. Cut-out and tuckpoint the East elevation solid

5. Cut-out and tuckpoint various open joints, holes, and hard-mortar areas - *this would address all areas of failed or missing mortar, as well as all portions of mortar which have been tuckpointed in the past with cement mortar and which are too hard for the soft clay brick; these areas of mortar are evidenced by the clay brick having broken or spalled faces.*

6. Cut-out and tuckpoint the South, West, and North elevations solid

A question was raised by the Owner group, subsequent to analsyis of the structure, regarding masonry toppings, coatings and treatments. It is believed that the exterior brick masonry at Hanley House was painted at one time, and so it was asked whether the brick ought be painted to match original (historic) appearances. It is the general opinion of this report that painting and otherwise sealing clay masonry units and mortar can be detrimental to the natural outflow of moisture from such a naturally porous set of materials, and likewise can inhibit regular expansion and contraction of materials which are exposed to seasonal and freeze / thaw cycles.

Nonetheless, additional recommendations for the Hanley House exterior masonry include:

7. Install new breathable clay masonry sealer - *as recommended, this would be most advantageous and cost effective when applied to horizontal surfaces, such as the tops of masonry parapets, but could also be used to generate a somewhat darkened, more uniform appearance at the exterior brick.*

8. Install new translucent tinted coating - *unlike a sealer product which would dry clear, a tinted coating would have a definite pigment, and would harken back to the days of Greek temples with polychromatic rustic paints applied throughout - it remains to be confirmed, though, what period of the Hanley House's use painted brick (if any) played a role.*

Exterior Wood Decks, Railings and Trim

Similar to the condition of exterior windows and doors at Hanley House, exterior wood decks, railings and trim (including shutters) are in need of significant refurbishment, and / or replacement. The fundamental difference between these items and the exterior windows and doors, though, is that decks, railings and trim items are not part of the exterior envelope, and therefore do not (immediately) threaten the integrity of the masonry, the building interior, nor the building foundation. If left unaddressed, these items still pose a threat in that they could conceal aspects of envelope deterioration, and likewise, could themselves fail and cause other damage.

Whereas stripping and painting of the exterior wood decks and railings might go a long way to preserving these various trim pieces, this report is aware that both the east and the west porches are not original to the house; rather, they are understood to have been rebuilt in the ca. 1970 package of renovations and were designed to replicate original construction. Given the presence of lead-based paint, and taking into account the cost of labor and abatement services, the recommendation to address these items is therefore to replace them fully.

Prior to such wholesale demolition and replacement, it is acknowledged that the Owner desires to continue to access the existing decks, if they are believed to be safe and secure. It is herewith that the structural capacity of existing exterior wood decks has been questioned by the Owner group, with specific respect to allowable numbers of persons who could safely occupy each deck. As the condition and outwardly-apparent construction of the decks would suggest, it is the opinion of this report that the four decks are likely to have been framed using modern, kiln-dried (and possibly pressure treated) lumber. Thus, despite noted “give” and movement in each deck frame and cladding when occupied, it is presumed that they are sound to the extent that they can be analyzed for loading from their outward dimension.

So, taking the actual deck area measurement(s), the actual (apparent; unverified due to full enclosure) depth of deck framing, presuming a conservative live-load of 60 pounds-per-square-foot (psf), and a dead-load of materials of 20 psf, it is believed that the east porch (each level) could safely support a maximum of 9 adult persons. Likewise, it is believed that the west porch (each level) could hold a maximum of 12 adult persons.

While the code would require that reconstructed decks be capable of resisting a live-load of 100 pounds per square foot, it is difficult to calculate an actual loading capacity limit without explicit knowledge of the existing framing. Reconstruction of the decks, on the other hand, would resolve this issue. Regardless, it is recommended that the Owner install signage stating the above-calculated occupancy limits, as a precaution against overloading.

The shutters at Hanley House are a mixture of original units that have been repainted over time, and new units (presumably fabricated and installed ca. 1970). The replacement shutters are noted as not having replicated the mortise-and-tenon construction of the original shutters, and not matching the dimensions of the originals entirely. This report would therefore recommend replacement of all replica shutters, and conservation of all existing original shutters.

Mechanical, Plumbing and Electrical Systems

The majority of heating / ventilating / air conditioning (HVAC), plumbing, and electrical systems and their components at the Hanley House and Summer Kitchen are modern systems, and were retrofit into the ca. 1855 structure less than 40 years ago. Installed in areas that were felt to offer concealment and subtlety, the systems were designed to meet or exceed the standards of manufacture and function for their time. Several of the aspects of the retrofit systems have outlived their useful lives, however, and are now liabilities to the home. Some are even code deficiencies, such as the lack of a single discoonect (shut-off switch) at the main electrical panel.

With the advent of contemporary mechanical, plumbing, and electrical (MPE) building codes, the ability to improve the condition and safety of the house and its artifacts through a significant package of engineering systems renovations, and the need to replace certain critical portions of said systems (such as the HVAC condensing units), the scope of MPE recommendations made as part of this report is extensive.

Recommendations for the Hanley House MPE systems include:

1. New HVAC distribution system(s) - *this would include new condensing units, furnaces, air handlers and coils, controls, and duct work, all with improved efficiencies.* $ 140,289.62
2. New fresh air intake and exhaust design to comply with code $ included above
3. New electrical service and distribution - *this would eliminate electrical code deficiencies of a missing main disconnect, as well as aluminum and cloth covered conductors* $ 51,153.62
4. New lighting and egress / emergency lighting
5. New sump-pump $ included below
6. New underfloor plumbing and toilet facility - *this would eliminate a code deficiency, but would be a moot point if additional construction were to be proposed which would include toilet facilities; a variance might also address these items.* $ included below
7. New domestic hot water heater $ 19,209.87

In order to further compare each option and scope for recommended renovations to mechanical and electrical infrasturcture systems, a relative, pro-rated rough order of-magnitude cost for each heading of recommended work system is included with above.

Mechanical, Plumbing and Electrical Systems *cont'd*

A comment was made by City of Clayton Parks and Recreation staff during analysis of the structure regarding what possibility there would be of removing the metal supply air diffusers and return air grilles found throughout Hanley House. These items are clearly part of the retrofit mechanical work that was performed several decades ago, and seem to go against the historic character of the home. Not to mention the fact that these metal air devices (and the attached supply air duct that connects to them) are poorly insulated, and have allowed atmospheric condensation to occur, and thereby have led to deterioration of plaster and wall finishes in several rooms (such damage from ducts "sweating" is primarily found on the home's Second level).

Two further recommendations for the Hanley House mechanical design would be:

8. New supply air methodology - *in addition to full replacement of HVAC system, construction of clouds in each of the Second level ceilings to better distribute and mix supply air*

9. Alternative new HVAC distribution system(s) - *in lieu of a typical HVAC system, a Small Diameter High Velocity (SDHV) system could be considered - see appendix this item.*

Fire Suppression System

A variety of systems and strategies exist for fighting fire in buildings, but the most universally accepted and relied upon is the automatic sprinkler system. In museum and sensitive document and artifact settings, though, the potential introduction of prodigious quantities of water into the environment is not desirable. The use of chemicals, "dry" systems (pressurized with air to avoid leaks and freeze-burst issues in unconditioned spaces such as attics), and concealed means of drainage in floors is the basis for this report's recommendation for fire suppression.

Recommended fire suppression system for the Hanley House:

1. Automatic pre-action fire suppression system (to protect Hanley House and Summer Kitchen) - *this would include distribution to concealed side-wall heads in all aspects of the existing construction, all necessary excavation and plumbing work, controls, devices, testing and monitoring, and finish work to install. The system would be addressable, and would be zoned by room / area of the home.*

   The above system would be charged with air to act as a safeguard. Further, the system would only engage in the event that conditions of a double fail-safe were met - heat and smoke from a fire would have to be present.

A relative, pro-rated rough order of-magnitude cost for the above heading of recommended work to furnish and install a fire suppression system is: $ 190,630.05

Fire Suppression System *cont'd*

In discussion with the City of Clayton and the Hanley House Council, it was suggested that a more robust and compartmentalized fire suppression system might be desirable. As such, this report has conceived of a second, combination-type automatic fire suppression system to offer even greater safeguard against damage to the home and its artifacts in the event of a fire event. Although not explicitly quoted by a fire suppression designer / contractor, this combination-type of system is acknowledged to be significantly more expensive and complex, both in terms of its layout and installation during construction, as well as its monitoring and controls during the life and operation of Hanley House. Nonetheless, it is a viable option to consider.

Alternative recommended fire suppression system for the Hanley House (in lieu of no. 1 above):

2. Combined automatic fire suppression system (to protect Hanley House and Summer Kitchen) - *this would include three discrete fire suppression systems, two with water and one segregated system with a chemical discharge capacity. A typical wet system would be installed in the conditioned / non-public spaces (Ground level). Then, a typical dry system (charged with air to act as a safeguard against leaks, and with dedicated compressor) would serve the unconditioned spaces (attic and porches). Although a pre-action system (per item no. 1 above) could be installed in said unconditioned / public spaces, it is not believed to be necessary due to these areas not being used for storage of any irreplaceable or historic items.*

   It is noted, however, that the attic is directly above Second level artifact rooms, and so may warrant consideration of a pre-action function. Similar to the above, the pre-action dry system would only engage in the event that conditions of a double fail-safe were met - heat and smoke from a fire would have to be present.

   Lastly, a gas / chemical suppression system would be utilized in the artifact / public spaces (First and Second levels - rooms and corridors). Distribution to all fire suppression points would be via concealed side-wall heads, meant to be as inconspicuous as possible. And similar to no. 1 above, this recommendation would include a scope of excavation and plumbing work, controls, devices, testing and monitoring, and finish work to install.

A relative, pro-rated rough order of-magnitude cost for the above heading of recommended work to furnish and install a fire suppression system is: $ 266,882.07

This higer estimated cost represetns a roughly 40% premium over and above the recommended system.

In further discussion with the City of Clayton and the Hanley House Council, it was suggested that yet another alternative might warrant consideration in lieu of a full-fledged fire suppression system. This would consist of a full-time monitored, fire alarm and detection system with direct connection to fire department for dispatch in the event of a fire.

Second alternative recommended fire detection system for the Hanley House (in lieu of no.s 1 and 2 above):

3. Full-time monitored fire-alarm and detection sysetm - *an addressable system and all electrical upgrades is already presumed to be required by code, but a more robust monitoring component and service would be suggested in lieu of fire suppression.*

An estimated cost to monitor per the above on a yearly contract basis: $ 8,500.00

Rough-Order-Of-Magnitude Cost Estimate

Replace Existing Finish Roof and Flashings	$		*Note: only High Priority Items of Recommended Capital Maintenance listed herewith - refer to section 7 appendices 1 and 2 "Assessment Summary" and "Architectural Report" for complete listing with estimate costs and priority rankings*
Replace Existing Gutter and Downspout System	$		
Replace Existing HVAC System	$		
Conserve Existing Exterior Windows and Doors	$		
Exterior Clay Masonry Refurbishment	$		
Exterior Stone Masonry Refurbishment	$		
Replace Existing Exterior Wood Decks, Railings and Trim	$		
Conserve Existing Exterior Wood Shutters	$		
Replace Existing Electrical Distribution Panel and Circuitry	$		
Upgrade Existing Fire Alarm	$		
Install Automatic Fire Suppression System	$		
Sub-total (includes all recommended scopes of work)	$	892,014.34	
General Conditions (General Contractor)	$	133,802.15	
Overhead & Profit (General Contractor)	$	89,201.43	
Bond (General Contractor)	$	17,840.29	
Permits and Liability Insurance	$	17,840.29	
Sub-total	$	1,150,698.49	
Builder's Risk Insurance - *assumed by Owner*	$	*not included*	
Site Observation and Testing - *assumed by Owner*	$	*not included*	
Professional Design and Engineering Fee	$	97,011.33	
Construction Contingency at 7%	$	62,441.00	
Grand Total	$	1,310,150.82	

It should be noted that the R-O-M cost estimate is considered valid for a construction start date through spring of 2008. This would require that the Owner solicit bids from interested general contractors in the last quarter of 2007 / first quarter of 2008. This report assumes a 9% escalation in "hard cost" per annum every 12 months thereafter.

Refer to section 7 appendix 6 for cost quotes and scope descriptions written by contractors and consultants who reviewed the existing conditions.

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section 7:

Appendices

The following items represent related reports used by the architect, and documentation materials submitted by technical consultants for purposes of this investigation:

1 Assessment Summary

2 Architectural Report

3 Summary: Mechanical / Electrical Engineer Notes and Report

4 Summary: Structural Engineer Notes and Report

5 Circuit Panel Legend

6 Submitted Cost: Miscellaneous Estimates and Quotes

7 Specifications and Correspondence: Ca. 1970 Renovation

8 Existing Conditions Drawings

9 Plat Book Page: 7600 Westmoreland Avenue

10 Ordinance 3242: Site and Improvements

11 Not Used

12 Discussion of Addition to the Site

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ASSESSMENT SUMMARY

	Items of Prioritized Capital Maintenance and Proposed Solutions	Priority: High	Priority: Medium	Priority: Low	Estimated Order-of-Magnitude Cost
HANLEY HOUSE					
Exterior Issues					
1	Replace roof system at all pitched roof		X		$ 63,282.83
2	Refurbish gutter and downspout system	X			$ 11,040.00
3	Preserve masonry parapet		X		$ 7,500.00
4	Tuckpoint brick masonry at flues			X	$ 6,040.00
5	Repaint exterior wood trim	X			$ 6,040.00
6	Refurbish wood shutters			X	$ 17,201.00
7	Refurbish wood sills at south elevation	X			$ 3,705.00
8	Install steel lintels at south, north and west elevations		X		$ 11,050.00
9	Refurbish window sashes and frames	X			$ 151,026.03
10	Refurbish exterior doors and frames	X			$ 22,850.00
11	Repair brick at south elevation	X			$ 6,150.00
12	Tuckpoint south-facing brick masonry above box gutter line		X		$ 1,750.00
13	Tuckpoint south-facing brick masonry below box gutter line	X			$ 10,050.00
14	Tuckpoint east-facing brick masonry		X		$ 7,950.00
15	Repair brick at north elevation		X		$ 6,300.00
16	Tuckpoint north-facing brick masonry above box gutter line		X		$ 1,750.00
17	Tuckpoint north-facing brick masonry below box gutter line	X			$ 3,250.00
18	Tuckpoint west-facing brick masonry		X		$ 7,450.00
19	Refurbish exterior of stone masonry foundation	X			$ 36,250.00
20	Refurbish interior of stone masonry foundation		X		$ 2,150.00
21	Apply clear seal coat at exterior brick masonry			X	$ 2,560.00
22	Paint brick masonry			X	$ 6,210.00
23	Refurbish east wood gable and two-level porch		X		$ 22,556.00
24	Refurbish west wood two-level porch		X		$ 21,456.00
25	Install anti-bird devices throughout			X	$ 2,250.00
26	Replace ground-level mechanical room exterior door			X	$ 1,110.00
27	Line not used				$ -
28	Line not used				$ -
Hanley House Interior Issues					
29	Improve existing hatch and access to pitched roof			X	$ 460.00
30	Restore interior masonry walls at attic level			X	$ 4,080.00
31	Remove debris from attic level			X	$ 440.00
32	Augment insulation in attic level framing	X			$ 2,871.20
33	Install seismic bracing per design in attic level framing system	X			$ 6,632.00
34	Bolster roof framing at bearing walls		X		$ 11,544.00
35	Install seismic bracing per design in second level framing system	X			$ 6,745.00

ASSESSMENT SUMMARY

	Items of Prioritized Capital Maintenance and Proposed Solutions	Priority: *High*	*Medium*	*Low*	Estimated Order-of-Magnitude Cost
Hanley House Interior Issues *continued*					
36	Install seismic bracing per design in first level framing system	X			$ 6,745.00
37	Ceiling renovations for new HVAC design			X	$ 22,435.20
38	Refurbish interior doors and frames			X	$ 24,957.50
39	Finish carpentry and paint work at windows	X			$ -
40	Plaster refurbishment at wall cracks			X	$ 4,080.00
41	Line not used				$ -
42	Line not used				$ -
Hanley House Systems Issues					
43	Replace HVAC system and source ducting		X		$ 30,830.00
44	Terminate underground ducting to Summer Kitchen		X		$ 260.00
45	Modify existing combustion and fresh-air duct routing		X		$ 6,223.00
46	Modify existing supply duct routing		X		$ 18,480.00
47	Refurbish existing supply and return duct routing	X			$ 7,795.00
48	Replace HVAC controls		X		$ 7,000.00
49	Replace electrical service	X			$ 2,710.00
50	Relocate electrical meter	X			$ 1,335.00
51	Replace in-wall electrical conductors and outlets		X		$ 13,820.50
52	Augment electrical egress lighting system per code		X		$ 5,120.00
53	Augment fire alarm system per code		X		$ 9,120.00
54	Replace recessed can lighting design			X	$ 6,475.00
55	Replace domestic hot water heater			X	$ 1,590.00
56	Verify function of domestic water booster pump			X	$ 280.00
57	Install sump pit and pump	X			$ 2,500.00
58	Replace underfloor plumbing at ground level			X	$ 6,570.00
59	Refurbish toilet room in ground level			X	$ 2,800.00
60	Close floor drain in unexcavated ground-level area			X	$ 280.00
61	Reconfigure lawn sprinkler system heads	X			$ 960.00
62	Route-out below-grade storm water lines	X			$ 600.00
63	Test and balance HVAC system			X	$ 2,500.00
64	Install new automatic pre-action fire suppression system	X			$ 129,800.00

ASSESSMENT SUMMARY

	Items of Prioritized Capital Maintenance and Proposed Solutions	Priority: *High*	*Medium*	*Low*	Estimated Order-of-Magnitude Cost
SUMMER KITCHEN					
Exterior Issues					
65	Replace roof system at all pitched roof		X		$ 23,571.66
66	Refurbish gutter and downspout system	X			$ 4,450.00
67	Preserve masonry parapet		X		$ 4,950.00
68	Tuckpoint brick masonry at flue			X	$ 1,450.00
69	Repaint exterior wood trim	X			$ 2,160.00
70	Wood cladding refurbishment at south roof overhang			X	$ 1,000.00
71	Refurbish wood shutters			X	$ 2,269.00
72	Refurbish window sashes and frames	X			$ 9,722.17
73	Refurbish exterior doors and frames	X			$ 8,220.00
74	Tuckpoint and repair south-facing brick masonry		X		$ 7,500.00
75	Tuckpoint and repair east-facing brick masonry	X			$ 3,750.00
76	Tuckpoint and repair north-facing brick masonry	X			$ 6,050.00
77	Tuckpoint and repair west-facing brick masonry	X			$ 4,350.00
78	Refurbish exterior of stone masonry foundation		X		$ 1,650.00
79	Apply clear seal coat at exterior brick masonry			X	$ 1,026.00
80	Paint brick masonry			X	$ 1,400.00
81	Refurbish south deck			X	$ 5,102.00
82	Line not used				$ -
83	Line not used				$ -
Summer Kitchen Interior Issues					
84	Install new hatch and access to attic space		X		$ 1,110.00
85	Augment insulation in attic level framing		X		$ 1,342.40
86	Install seismic bracing per design in attic floor framing system	X			$ 2,685.33
87	Plaster refurbishment at wall cracks			X	$ 3,840.00
Summer Kitchen Systems Issues					
88	Replace HVAC system and source ducting		X		included with HH reno.
89	Terminate underground ducting to Summer Kitchen		X		included with HH reno.
90	Replace HVAC controls		X		included with HH reno.
91	Replace in-wall electrical conductors and outlets		X		$ 3,440.50
92	Augment electrical egress lighting system per code		X		$ 1,930.00
93	Augment fire alarm system per code		X		$ 2,080.00
94	Reconfigure lawn sprinkler system heads	X			included with HH reno.
95	Route-out below-grade storm water lines	X			included with HH reno.
96	Test and balance HVAC system			X	included with HH reno.
97	Install new automatic pre-action fire suppression system	X			included with HH reno.

Martin Franklin Hanley House
7600 Westmoreland Avenue
Clayton, Missouri 63105

LAWRENCE GROUP

ASSESSMENT SUMMARY

Items of Prioritized Capital Maintenance and Proposed Solutions		Estimated Order-of-Magnitude Cost
HANLEY HOUSE		
High Priority Assessment Scope Construction Cost Estimate * *Addresses all recommended high priority Architectural, Structural, and MEP/FP Systems issues at **Hanley House** only*		$ 419,054.23
Medium Priority Assessment Scope Construction Cost Estimate * *Addresses all recommended medium priority Architectural, Structural, and MEP/FP Systems issues at **Hanley House** only*		$ 255,592.33
Low Priority Assessment Scope Construction Cost Estimate * *Addresses all recommended low priority Architectural, Structural, and MEP/FP Systems issues at **Hanley House** only*	+	$ 112,318.70
HANLEY HOUSE Assessment Scope Estimate Sub-Total		$ 786,965.27
SUMMER KITCHEN		
High Priority Assessment Scope Construction Cost Estimate * *Addresses all recommended high priority Architectural, Structural, and MEP/FP Systems issues at **Summer Kitchen** only*		$ 41,387.51
Medium Priority Assessment Scope Construction Cost Estimate * *Addresses all recommended medium priority Architectural, Structural, and MEP/FP Systems issues at **Summer Kitchen** only*		$ 47,574.56
Low Priority Assessment Scope Construction Cost Estimate * *Addresses all recommended low priority Architectural, Structural, and MEP/FP Systems issues at **Summer Kitchen** only*	+	$ 16,087.00
SUMMER KITCHEN Assessment Scope Estimate Sub-Total		$ 105,049.07

Martin Franklin Hanley House
7600 Westmoreland Avenue
Clayton, Missouri 63105

LAWRENCE GROUP

ASSESSMENT SUMMARY

Items of Prioritized Capital Maintenance and Proposed Solutions			Estimated Order-of-Magnitude Cost
HANLEY HOUSE Assessment Scope Estimate Sub-Total		$	786,965.27
SUMMER KITCHEN Assessment Scope Estimate Sub-Total		$	105,049.07
Aggregate Prioritized Assessment Scope Estimate Sub-Total		$	892,014.34
* *Addresses all recommended Architectural, Structural, and MEP/FP Systems issues at **Hanley House** and **Summer Kitchen***			
Project Overhead, Fee, and General Conditions Cost Estimate		$	258,684.16
a *Field Supervision and General Contractor's Project Manager / Overhead Expense*		$	133,802.15
b *General Contractor's Profit and Fee*		$	89,201.43
c *Performance & Payment and Labor & Material Bonds*		$	17,840.29
d *Permits and Liability Insurance*		$	17,840.29
e *Builder's Risk Insurance (Project Specific)*		*Excluded from estimate - assumed by Owner*	
Project Design Cost Estimate		$	97,011.33
a *Assessment Report Consultant*		$	14,500.00
b *Architect / Historical Consultant*		$	62,441.00
c *Structural Engineer*		$	8,920.14
d *MEP/FP Engineer*		$	11,150.18
Construction Scope Contingency	+	$	62,441.00
* *7% of Aggregate Prioritized Assessment Scope Cost Estimate*			
Grand Total Assessment Scope Construction Cost Estimate		$	1,310,150.82
* *Addresses all recommended construction hard and soft cost for prioritized assessed issues at **Hanley House** and **Summer Kitchen***			

ARCHITECTURAL REPORT

Line Item with General Notes	Quant.	Unit	Cost per Unit	Budget Calculations

HANLEY HOUSE

Exterior Issues

1		Replace roof system at all pitched roof							
		Demolish and dispose existing finish cement roof tiles	1,313	sq.ft.	$	1.40	sq.ft.	$	1,838.59
		Access for seismic bracing at attic framing level	1	qty.	$	350	qty.	$	350.00
		Misc. sheathing repairs and replacement	1	qty.	$	600	qty.	$	600.00
		Install new low-profile vent system and sleeve at vent stack	1	qty.	$	740	qty.	$	740.00
		Install new 15 lb. felt and water / ice shield at eaves	0	qty.	$	-	qty.	included with below	
		Install new 16 oz. copper step flashings with sealed reglet	0	qty.	$	-	qty.	included with below	
vs.	1	Install new heavy split cedar shake finish roofing	1,313	sq.ft.	$	45.50	sq.ft.	$	59,754.24
	X	Install new medium split cedar shake finish roofing	1,313	sq.ft.	$	44.00	sq.ft.	$	57,784.32
	X	Install new Vermont S-2 slate tile roofing	1,313	sq.ft.	$	54.75	sq.ft.	$	71,902.08
2		Refurbish gutter and downspout system							
	X	Miscellaneous patch repairs and sealant work at box gutter	1	qty.	$	1,540	qty.	$	1,540.00
vs.		Remove and replace 20 oz. copper liner at box gutter	1	qty.	$	4,610	qty.	$	4,610.00
		Remove and re-hang west gutter at low-slope roof	1	qty.	$	1,290	qty.	$	1,290.00
		Remove and replace pipe downspouts - to include expansion	1	qty.	$	4,800	qty.	$	4,800.00
		Inspect and verify below-grade storm-water boots	1	qty.	$	340	qty.	$	340.00
3		Preserve masonry parapet							
		Remove and replace cracked or damaged brick units	1	qty.	$	850	qty.	$	850.00
		Cut-out and point solid with type 'N' or softer mortar	1	qty.	$	3,250	qty.	$	3,250.00
		Cut-out and install rod and sealant at corbeled joints	1	qty.	$	2,050	qty.	$	2,050.00
		Clean and seal exterior brick masonry - top of parapet	1	qty.	$	1,350	qty.	$	1,350.00
4		Tuckpoint brick masonry at flues							
		Remove and replace cracked or damaged brick units	1	qty.	$	1,440	qty.	$	1,440.00
		Cut-out and point solid with type 'N' or softer mortar	1	qty.	$	4,600	qty.	$	4,600.00
5		Repaint exterior wood trim							
		Strip, clean, and prepare exterior wood trim	1	qty.	$	1,920	qty.	$	1,920.00
		Miscellaneous patch repairs at cornice and face trim	1	qty.	$	1,300	qty.	$	1,300.00
		Prime and paint per design for restoration	1	qty.	$	2,880	qty.	$	2,880.00
6		Refurbish wood shutters							
		Remove and preserve for reuse existing wood shutters	1	qty.	$	1,950	qty.	$	1,950.00
		Restore existing hardware - remove, strip, reclad, and reinst.	1	qty.	$	5,526	qty.	$	5,526.00
		Conserve, refurbish, strip and repaint wood shutters	1	qty.	$	7,028	qty.	$	7,027.50
		Re-install wood shutters on existing hardware	1	qty.	$	2,698	qty.	$	2,697.50
7		Refurbish wood sills at south elevation							
		Remove and dispose existing sill and overlay construction	1	qty.	$	975	qty.	$	975.00
		Replace wood sill to match existing exposed wood design	1	qty.	$	2,050	qty.	$	2,050.00
		Prime and paint sill per design for restoration	1	qty.	$	680	qty.	$	680.00
8		Install steel lintels at south, north and west elevations							
	X	Remove and replace brick to allow access for retro-fit lintel	1	qty.	$	7,800	qty.	$	7,800.00
		Install painted steel angle lintel with flashing at window heads	13	lintel	$	250	lintel	$	3,250.00
9		Refurbish window sashes and frames							
	X	Install UV protectant film on existing windows - double-hung	1	qty.	$	5,400	qty.	$	5,400.00
vs.	X	Remove existing window sashes and protect openings	0	qty.	$	-	qty.	included with below	
	X	Refurbish existing sills at exterior - assumes 40% replacemt.	1	qty.	$	12,240	qty.	$	12,240.00
		Prime and paint exterior window finish per design for restor.	0	qty.	$	-	qty.	included with below	
	X	Associated finish work per window design - see interiors	0	qty.	$	-	qty.	included with below	
	X	Conserve existing window sashes and reinstall	1	qty.	$	121,488	qty.	$	121,488.03
		Install new painted brickmould and sealant at exterior	1	qty.	$	4,968	qty.	$	4,968.00

ARCHITECTURAL REPORT

		Line Item with General Notes	Quant.	Unit		Cost per Unit			Budget Calculations
Hanley House Exterior Issues *continued*									
vs.		Remove and dispose existing window sashes - double-hung	24	unit	$	300	unit	$	7,200.00
		Remove and dispose existing window sashes - clerestory	4	unit	$	75	unit	$	300.00
		Conserve frames and interior trim in place - double-hung	1	qty.	$	2,400	qty.	$	2,400.00
		Conserve frames and interior trim in place - clerestory	1	qty.	$	600	qty.	$	600.00
	X	Refurbish existing sills at exterior - assumes 40% replacemt.	1	qty.	$	12,240	qty.	$	12,240.00
		Fabricate and deliver new sashes - double-hung and clere.	1	qty.	$	98,122	qty.	$	98,122.46
	X	Install new sashes in existing frames - double-hung	24	unit	$	925	unit	$	22,200.00
		Install new sashes in existing frames - clerestory	4	unit	$	325	unit	$	1,300.00
		Install new painted brickmould and sealant at exterior	1	qty.	$	4,968	qty.	$	4,968.00
		Paint exterior window finish per design for restor.	1	qty.	$	7,200	qty.	$	7,200.00
		Associated new finish work per window design - see inter.	1	qty.	$	3,960	qty.	$	3,960.00
	X	Reglaze existing side-lites and transom in place	5	unit	$	1,420	unit	$	7,100.00
vs.		Remove existing side-lites and transoms	1	qty.	$	880	qty.	$	880.00
		Install new side-lites and transom - match glass design	5	unit	$	2,290	unit	$	11,450.00
10		Refurbish exterior doors and frames							
		Remove and store existing door slabs, hardware	6	opening	$	260	opening	$	1,560.00
		Restore existing hardware - remove, strip, reclad, and reinst.	1	qty.	$	3,250	qty.	$	3,250.00
		Conserve, refurbish, strip and repaint existing door slabs	1	qty.	$	4,000	qty.	$	4,000.00
		Re-construct frames to match historic design at exterior	6	opening	$	780	opening	$	4,680.00
		Re-install conserved existing slabs in re-constructed frame	6	opening	$	1,560	opening	$	9,360.00
vs.	X	Remove and replace existing door slabs with new hardware	6	opening	$	2,430	opening	$	14,580.00
		Paint new door slabs and frames per design for restoration	6	opening	$	385	opening	$	2,310.00
11		Repair brick at south elevation							
		Remove and replace cracked brick units - west end of elev.	1	qty.	$	3,500	qty.	$	3,500.00
		Cut-out and install rod and sanded sealant at cracks	1	qty.	$	2,650	qty.	$	2,650.00
12		Tuckpoint south-facing brick masonry above box gutter line							
		Cut-out and point solid with type 'N' or softer mortar	1	qty.	$	1,750	qty.	$	1,750.00
13		Tuckpoint south-facing brick masonry below box gutter line							
		Cut-out and point misc. open joints with type 'N' or softer	1	qty.	$	3,250	qty.	$	3,250.00
vs.	X	Cut-out and tuckpoint solid with type 'N' or softer	1	qty.	$	6,800	qty.	$	6,800.00
14		Tuckpoint east-facing brick masonry							
		Remove and replace cracked or damaged brick units	1	qty.	$	3,250	qty.	$	3,250.00
		Cut-out and install rod and sanded sealant at cracks	1	qty.	$	2,650	qty.	$	2,650.00
		Cut-out and point misc. open joints with type 'N' or softer	1	qty.	$	2,050	qty.	$	2,050.00
vs.	X	Cut-out and tuckpoint solid with type 'N' or softer	1	qty.	$	7,250	qty.	$	7,250.00
15		Repair brick at north elevation							
		Remove crack monitor devices and mastic	1	qty.	$	150	qty.	$	150.00
		Remove and replace cracked or damaged brick units	1	qty.	$	3,500	qty.	$	3,500.00
		Cut-out and install rod and sanded sealant at cracks	1	qty.	$	2,650	qty.	$	2,650.00
16		Tuckpoint north-facing brick masonry above box gutter line							
		Cut-out and point solid with type 'N' or softer mortar	1	qty.	$	1,750	qty.	$	1,750.00
17		Tuckpoint north-facing brick masonry below box gutter line							
		Cut-out and point misc. open joints with type 'N' or softer	1	qty.	$	3,250	qty.	$	3,250.00
vs.	X	Cut-out and tuckpoint solid with type 'N' or softer	1	qty.	$	6,800	qty.	$	6,800.00
18		Tuckpoint west-facing brick masonry							
		Remove and replace cracked or damaged brick units	1	qty.	$	1,450	qty.	$	1,450.00
		Cut-out and install rod and sanded sealant at cracks	1	qty.	$	3,950	qty.	$	3,950.00
		Cut-out and point misc. open joints with type 'N' or softer	1	qty.	$	2,050	qty.	$	2,050.00
		Cut-out and install rod and sealant at railings and misc. items	1	qty.	$	750	qty.	$	750.00

ARCHITECTURAL REPORT

Line Item with General Notes	Quant.	Unit	Cost per Unit		Budget Calculations
Hanley House Exterior Issues *continued*					
19 Refurbish exterior of stone masonry foundation					
Excavate in sections to reveal existing foundation	0	qty.	$ -	qty.	included with below
Install drain tile system at exterior foundation perimeter	1	qty.	$ 9,700	qty.	$ 9,700.00
2 Cut-out and install rod and sealant at cracks	1	qty.	$ 2,050	qty.	$ 2,050.00
2 Cut-out and point solid with type 'M' in raised joints - grade +	1	qty.	$ 1,150	qty.	$ 1,150.00
2 Cut-out and point misc. joints with type 'M' mortar - sub-grade	1	qty.	$ 3,850	qty.	$ 3,850.00
Install foundation stabilization devices per design	1	qty.	$ 15,000	qty.	$ 15,000.00
Re-install earth and landscaping over drain tile system	1	qty.	$ 4,500	qty.	$ 4,500.00
20 Refurbish interior of stone masonry foundation					
3 Cut-out and install rod and sealant at cracks	1	qty.	$ 1,450	qty.	$ 1,450.00
3 Rake and point misc. open joints with type 'S' or softer	1	qty.	$ 700	qty.	$ 700.00
21 Apply clear seal coat at exterior brick masonry					
4 Clean and seal exterior brick masonry - all elevations	1	qty.	$ 2,560	qty.	$ 2,560.00
22 Paint brick masonry					
X Clean, prepare, prime, and paint exposed clay brick per des.	1	qty.	$ 6,210	qty.	$ 6,210.00
23 Refurbish east wood gable and two-level porch					
Refinish, close, and re-paint gable face cladding	120	sq.ft.	$ 7.75	sq.ft.	$ 930.00
Refinish, close, and re-paint second floor ceiling	192	sq.ft.	$ 5.25	sq.ft.	$ 1,008.00
Remove and replace miscellaneous rotten boards	1	qty.	$ 1,000	qty.	$ 1,000.00
Refinish, close, and re-paint second floor deck	192	sq.ft.	$ 4.00	sq.ft.	$ 768.00
Prepare and re-paint second floor railing system	1	qty.	$ 1,440	qty.	$ 1,440.00
Refinish, close, and re-paint first floor ceiling	192	sq.ft.	$ 5.25	sq.ft.	$ 1,008.00
Remove and replace miscellaneous rotten boards	1	qty.	$ 1,000	qty.	$ 1,000.00
Open first floor deck as required for piering installation	1	qty.	$ 1,040	qty.	$ 1,040.00
Refinish, close, and re-paint first floor deck	192	sq.ft.	$ 4.00	sq.ft.	$ 768.00
Prepare and re-paint first floor railing system	1	qty.	$ 960	qty.	$ 960.00
vs. Demolish existing porch framing, cladding and railings	1	qty.	$ 2,110	qty.	$ 2,110.00
Reconstruct porch to match existing - re-use columns	1	qty.	$ 17,922	qty.	$ 17,922.00
Install continuous sealant from brick to both levels of deck	115	li.ft.	$ 7.50	li.ft.	$ 864.00
Install new removable walk-surface protection at main path	1	qty.	$ 1,400	qty.	$ 1,400.00
Relocate knox-box into recess in column	1	qty.	$ 260	qty.	$ 260.00
24 Refurbish west wood two-level porch					
Refinish, close, and re-paint extended roof line cladding	1	qty.	$ 720	qty.	$ 720.00
Refinish, close, and re-paint second floor ceiling	180	sq.ft.	$ 5.25	sq.ft.	$ 945.00
Remove and replace miscellaneous rotten boards	1	qty.	$ 1,200	qty.	$ 1,200.00
Refinish, close, and re-paint second floor deck	180	sq.ft.	$ 4.00	sq.ft.	$ 720.00
Prepare and re-paint second floor railing system	1	qty.	$ 1,440	qty.	$ 1,440.00
Refinish, close, and re-paint first floor ceiling	180	sq.ft.	$ 5.25	sq.ft.	$ 945.00
Remove and replace miscellaneous rotten boards	1	qty.	$ 1,200	qty.	$ 1,200.00
Open first floor deck as required for piering installation	1	qty.	$ 1,040	qty.	$ 1,040.00
Refinish, close, and re-paint first floor deck	180	sq.ft.	$ 4.00	sq.ft.	$ 720.00
Prepare and re-paint first floor railing system	1	qty.	$ 1,440	qty.	$ 1,440.00
vs. Demolish existing porch framing, cladding and railings	1	qty.	$ 2,110	qty.	$ 2,110.00
Reconstruct porch to match existing - re-use columns	1	qty.	$ 15,946	qty.	$ 15,946.00
Install new removable walk-surface protection at main path	1	qty.	$ 1,600	qty.	$ 1,600.00
Install continuous sealant from brick to both levels of deck	144	li.ft.	$ 7.50	li.ft.	$ 1,080.00
25 Install anti-bird devices throughout					
Install netting and spikes per design for restoration	1	qty.	$ 2,250	qty.	$ 2,250.00

ARCHITECTURAL REPORT

Line Item with General Notes	Quant.	Unit	Cost per Unit	Budget Calculations
Hanley House Exterior Issues *continued*				
26 Replace ground-level mechanical room exterior door				
Install painted galvanized insulated HM door in new HM frame	1	qty.	$ 1,110 qty.	$ 1,110.00
27 Line not used				
	0	qty.	$ - qty.	$ -
28 Line not used				
	0	qty.	$ - qty.	$ -
Hanley House Interior Issues				
29 Improve existing hatch and access to pitched roof				
Cut-out overlapping 1/2" sheathing and frame opening	1	qty.	$ 260 qty.	$ 260.00
Install new hardware to operate and lock at access hatch	1	qty.	$ 200 qty.	$ 200.00
30 Restore interior masonry walls at attic level				
Rake-out and point solid above attic framing joists	1	qty.	$ 1,750 qty.	$ 1,750.00
Grout solid at 2x12 header where pocketed into bearing wall	1	qty.	$ 2,330 qty.	$ 2,330.00
31 Remove debris from attic level				
Remove and dispose of all existing stored materials	1	qty.	$ 440 qty.	$ 440.00
32 Augment insulation in attic level framing				
Abandon existing insulation in place - assume minor prepara.	1	qty.	$ 500 qty.	$ 500.00
Install R-30 insulation in attic framing level - rolls or blown	1,216	sq.ft.	$ 1.95 sq.ft.	$ 2,371.20
33 Install seismic bracing per design in attic level framing system				
5 Access through roof sheathing per roofer / scaffold	0	qty.	$ - qty.	included with roof scp.
Install seismic hanger from rafters to masonry bearing walls	1	qty.	$ 6,632 qty.	$ 6,632.00
34 Bolster roof framing at bearing walls				
Install steel angle to distribute load at end 2x12 beams	1	qty.	$ 864 qty.	$ 864.00
Install retro-fit column at interior wall bearing points of 2x12s	1	qty.	$ 8,480 qty.	$ 8,480.00
Misc. plaster cutting and patching to access column install.s	1	qty.	$ 2,200 qty.	$ 2,200.00
35 Install seismic bracing per design in second level framing system				
Misc. plaster cutting and patching to access seismic install.s	1	qty.	$ 3,820 qty.	$ 3,820.00
Install seismic hanger from rafters to masonry bearing walls	1	qty.	$ 2,925 qty.	$ 2,925.00
36 Install seismic bracing per design in first level framing system				
Misc. plaster cutting and patching to access seismic install.s	1	qty.	$ 3,820 qty.	$ 3,820.00
Install seismic hanger from rafters to masonry bearing walls	1	qty.	$ 2,925 qty.	$ 2,925.00
37 Ceiling renovations for new HVAC design				
Install suspended framing system with 5/8" gypsum type 'X'	2,354	sq.ft.	$ 6.85 sq.ft.	$ 16,127.64
Finish gypsum board ceiling - assumes trim edge to wall	2,354	sq.ft.	$ 1.15 sq.ft.	$ 2,707.56
Paint gypsum board ceiling	1	qty.	$ 3,600 qty.	$ 3,600.00
38 Refurbish interior doors and frames				
Verify function of sliding pocket doors	0	qty.	$ - qty.	$ -
Remove and store existing swinging door slabs, hardware	9	opening	$ 260 opening	$ 2,340.00
Restore existing hardware - remove, strip, reclad, and reinst.	1	qty.	$ 4,213 qty.	$ 4,212.50
Conserve, refurbish, strip and repaint existing door slabs	1	qty.	$ 6,705 qty.	$ 6,705.00
Re-construct frames to match historic design at interior	9	opening	$ 780 opening	$ 7,020.00
Re-install conserved existing slabs in re-constructed frame	9	opening	$ 520 opening	$ 4,680.00
vs. X Remove and replace existing door slabs with new hardware	9	opening	$ 2,130 opening	$ 19,170.00
Paint new door slabs and frames per design for restoration	9	opening	$ 385 opening	$ 3,465.00

ARCHITECTURAL REPORT

	Line Item with General Notes	Quant.	Unit	Cost per Unit		Budget Calculations
Hanley House Interior Issues *continued*						
39	Finish carpentry and paint work at windows					
	Associated new finish work per window design - see exter.	0	qty.	$ -	qty.	$ -
40	Plaster refurbishment at wall cracks					
	Grind out and patch plaster at repaired cracks	1	qty.	$ 2,640.00	qty.	$ 2,640.00
X	Paint at plaster patches and repairs per design for restor.	1	qty.	$ 1,440.00	qty.	$ 1,440.00
41	Line not used					
		0	sq.ft.	$ -	sq.ft.	$ -
42	Line not used					
		0	qty.	$ -	qty.	$ -
Hanley House Systems Issues						
43	Replace HVAC system and source ducting					
	Demolish and dispose existing furnaces and humidifiers	1	qty.	$ 1,020	qty.	$ 1,020.00
	Demolish and dispose existing water cooled condensers	1	qty.	$ 1,020	qty.	$ 1,020.00
	Demolish and dispose existing coolant	0	qty.	$ -	qty.	N/A
	Demolish and dispose existing combustion air design	1	qty.	$ 540	qty.	$ 540.00
X	Install new exterior condensers and piping per design	3	unit	$ 4,937	unit	$ 14,810.00
	Install new interior high efficiency furnace and humidifier	2	unit	$ 3,290	unit	$ 6,580.00
	Modify existing duct in mechanical room per design	1	qty.	$ 1,560	qty.	$ 1,560.00
	Install new dehumidifier unit	1	unit	$ 2,020	unit	$ 2,020.00
	Install new heat-wheel / exchanger unit	1	unit	$ 3,280	unit	$ 3,280.00
44	Terminate underground ducting to Summer Kitchen					
	Abandon and cap supply and return ducting to SK per design	1	qty.	$ 260	qty.	$ 260.00
45	Modify existing combustion and fresh-air duct routing					
	Remove and replace flue liners in various chimneys per des.	1	qty.	$ 1,443	qty.	$ 1,443.00
	Install concealed exhaust fan at terminus of HVAC exhaust	1	qty.	$ 3,740	qty.	$ 3,740.00
	Install new combustion air routing with screen in existing flue	1	qty.	$ 520	qty.	$ 520.00
	Install new fresh-air intake with screen in existing flue	1	qty.	$ 520	qty.	$ 520.00
46	Modify existing supply duct routing					
	Consolidate sheet metal duct routing to second floor per des.	1	qty.	$ 3,920	qty.	$ 3,920.00
	Replace sheet metal duct in attic to second floor per design	1	qty.	$ 5,140	qty.	$ 5,140.00
	Install new sheet metal duct in first floor ceilings per design	1	qty.	$ 4,860	qty.	$ 4,860.00
	Remove existing and Install new air devices per design	1	qty.	$ 4,560	qty.	$ 4,560.00
	Associated new ceiling work per HVAC design - see interior	0	qty.	$ -	qty.	included with clg. reno.
47	Refurbish existing supply and return duct routing					
	Vaccuum all supply and return ducting to remain	1	qty.	$ 1,200	qty.	$ 1,200.00
	Install new insulation at existing supply duct to remain	1	qty.	$ 2,555	qty.	$ 2,555.00
	Remove existing and Install new air devices per design	1	qty.	$ 4,040	qty.	$ 4,040.00
48	Replace HVAC controls					
	Install new three-zone control in single panel	1	qty.	$ 4,500	qty.	$ 4,500.00
	Locate panel per design and install remote T-stats (in zones)	1	qty.	$ 2,500	qty.	$ 2,500.00
49	Replace electrical service					
X	Install new 400 A service to new 42-pole panel and disconn.	1	qty.	$ 2,200	qty.	$ 2,200.00
	Install new additional ground	1	qty.	$ 510	qty.	$ 510.00

ARCHITECTURAL REPORT

		Line Item with General Notes	Quant.	Unit		Cost per Unit			Budget Calculations
Hanley House Systems Issues *continued*									
50		Relocate electrical meter							
	X	Coordinate with utility for relocation of meter to exterior	1	qty.	$	-	qty.	$	-
	X	Demountable carpentry enclosure to conceal electrical meter	1	qty.	$	1,335	qty.	$	1,335.00
51		Replace in-wall electrical conductors and outlets							
		Install new conduit plus future to first, second and attic levels	1	qty.	$	2,720	qty.	$	2,720.00
		Install new conductors from new panel to receptacle loc.s	1	qty.	$	6,120	qty.	$	6,120.00
		Install new receptacle devices with grounded leg	1	qty.	$	3,418	qty.	$	3,418.00
		Install new switch and control devices	1	qty.	$	1,563	qty.	$	1,562.50
52		Augment electrical egress lighting system per code							
		Install new circuits at new panel for expanded lighting design	1	qty.	$	-	qty.	included with below	
		Install new exit lighting fixtures per code	1	qty.	$	1,920	qty.	$	1,920.00
		Install new emergency lighting fixtures per code	1	qty.	$	3,200	qty.	$	3,200.00
53		Augment fire alarm system per code							
		Install new circuits at new panel for fire alarm system	1	qty.	$	-	qty.	included with below	
	X	Install new detection and notification devices per code	3,648	qty.	$	2.50	qty.	$	9,120.00
54		Replace recessed can lighting design							
	X	Remove and patch where removed all recessed can lights	1	qty.	$	1,275	qty.	$	1,275.00
		Install new concealed lighting design in new ceiling design	1	qty.	$	5,200	qty.	$	5,200.00
55		Replace domestic hot water heater							
		Remove and replace with new elevated electric unit	1	unit	$	1,590	unit	$	1,590.00
56		Verify function of domestic water booster pump							
		Test for adequate function - assumed to be functional	1	test	$	280	test	$	280.00
57		Install sump pit and pump							
		Refer back to foundation repair work for related scope	1	qty.	$	2,500	qty.	$	2,500.00
58		Replace underfloor plumbing at ground level							
		Cut and patch concrete slab as required to access plumbing	1	qty.	$	2,410	qty.	$	2,410.00
		Replace all underfloor waste water lines and fittings	1	qty.	$	3,120	qty.	$	3,120.00
		Misc. repairs to above floor plumbing as required	1	qty.	$	1,040	qty.	$	1,040.00
59		Refurbish toilet room in ground level							
		Verify function of clean-out and install new cover	1	qty.	$	-	qty.	included with below	
	X	Replace fixtures and re-pipe all	2	fixture	$	1,400	fixture	$	2,800.00
60		Close floor drain in unexcavated ground-level area							
		Install removable plug for later re-use	1	qty.	$	280	qty.	$	280.00
61		Reconfigure lawn sprinkler system heads							
		Re-orient as required to eliminate impact on exterior brick	1	qty.	$	960	qty.	$	960.00
62		Route-out below-grade storm water lines							
		Scope and clear all below-grade storm water lines	1	qty.	$	-	qty.	included with below	
		Verify function of all lines with camera - locate faults	1	qty.	$	600	qty.	$	600.00
63		Test and balance HVAC system							
		Per HVAC design and space function - with report	1	qty.	$	2,500	qty.	$	2,500.00
64		Install new automatic pre-action fire suppression system							
		Excavation and below- / above-grade plumbing work	1	qty.	$	110,000	qty.	$	110,000.00
		Distribution to concealed dry side-wall heads	0	qty.	$	-	qty.	included with above	
		New electrical control and monitoring / addressable panel	0	qty.	$	-	qty.	included with above	
		Landscaping allowance	1	qty.	$	4,800	qty.	$	4,800.00
		Miscellaneous finish work for access, and insulation	1	qty.	$	15,000	qty.	$	15,000.00

ARCHITECTURAL REPORT

		Line Item with General Notes	Quant.	Unit		Cost per Unit		Budget Calculations
SUMMER KITCHEN								
Exterior Issues								
65		Replace roof system at all pitched roof						
		Demolish and dispose existing finish cement roof tiles	467	sq.ft.	$	1.40	sq.ft.	$ 653.18
		Access for seismic bracing at attic framing level	1	qty.	$	350	qty.	$ 350.00
		Misc. sheathing repairs and replacement	1	qty.	$	600	qty.	$ 600.00
		Install new static vent system at eaves and ridge	1	qty.	$	740	qty.	$ 740.00
		Install new 15 lb. felt and water / ice shield at eaves	0	qty.	$	-	qty.	included with below
		Install new 16 oz. copper step flashings with sealed reglet	0	qty.	$	-	qty.	included with below
vs.	X	Install new heavy split cedar shake finish roofing	467	sq.ft.	$	45.50	sq.ft.	$ 21,228.48
	X	Install new medium split cedar shake finish roofing	467	sq.ft.	$	44.00	sq.ft.	$ 20,528.64
	X	Install new Vermont S-2 slate tile roofing	467	sq.ft.	$	54.75	sq.ft.	$ 25,544.16
66		Refurbish gutter and downspout system						
	X	Miscellaneous patch repairs and sealant work at gutters	1	qty.	$	720	qty.	$ 720.00
		Remove and re-hang gutters at pitched roof ends	1	qty.	$	1,290	qty.	$ 1,290.00
		Remove and replace pipe downspouts - to include expansion	1	qty.	$	2,100	qty.	$ 2,100.00
		Inspect and verify below-grade storm-water boots	1	qty.	$	340	qty.	$ 340.00
67		Preserve masonry parapet						
		Remove and replace cracked or damaged brick units	1	qty.	$	850	qty.	$ 850.00
		Cut-out and point solid with type 'N' or softer mortar	1	qty.	$	1,750	qty.	$ 1,750.00
		Cut-out and install rod and sealant at corbeled joints	1	qty.	$	1,450	qty.	$ 1,450.00
		Clean and seal exterior brick masonry - top of parapet	1	qty.	$	900	qty.	$ 900.00
68		Tuckpoint brick masonry at flue						
		Remove and replace cracked or damaged brick units	1	qty.	$	300	qty.	$ 300.00
		Cut-out and point solid with type 'N' or softer mortar	1	qty.	$	1,150	qty.	$ 1,150.00
69		Repaint exterior wood trim						
		Strip, clean, and prepare exterior wood trim	1	qty.	$	480	qty.	$ 480.00
		Refinish, close, and re-paint extended roof line cladding	1	qty.	$	720	qty.	$ 720.00
		Prime and paint per design for restoration	1	qty.	$	960	qty.	$ 960.00
70		Wood cladding refurbishment at south roof overhang						
		Strip, clean, and prepare exterior wood cladding - misc. rep.s	1	qty.	$	520	qty.	$ 520.00
	X	Prime and paint per design for restoration	1	qty.	$	480	qty.	$ 480.00
71		Refurbish wood shutters						
		Remove and preserve for reuse existing wood shutters	1	qty.	$	455	qty.	$ 455.00
		Restore existing hardware - remove, strip, reclad, and reinst.	1	qty.	$	674	qty.	$ 674.00
		Conserve, refurbish, strip and repaint wood shutters	1	qty.	$	685	qty.	$ 685.00
		Re-install wood shutters on existing hardware	1	qty.	$	455	qty.	$ 455.00
72		Refurbish window sashes and frames						
	X	Install UV protectant film on existing windows - double-hung	0	qty.	$	-	qty.	included with HH reno.
vs.	X	Remove existing window sashes and protect openings	0	qty.	$	-	qty.	included with below
	X	Refurbish existing sills at exterior - assumes 100% replacemt.	1	qty.	$	1,880	qty.	$ 1,880.00
		Prime and paint exterior window finish per design for restor.	0	qty.	$	-	qty.	included with below
	X	Associated finish work per window design - see interiors	0	qty.	$	-	qty.	included with below
	X	Conserve existing window sashes and reinstall	1	qty.	$	6,942.17	qty.	$ 6,942.17
		Install new painted brickmould and sealant at exterior	1	qty.	$	900	qty.	$ 900.00
vs.		Remove and dispose existing window sashes - double-hung	2	unit	$	300	unit	$ 600.00
		Conserve frames and interior trim in place - double-hung	1	qty.	$	900	qty.	$ 900.00
	X	Refurbish existing sills at exterior - assumes 100% replacemt.	1	qty.	$	1,880	qty.	$ 1,880.00

ARCHITECTURAL REPORT

		Line Item with General Notes	Quant.	Unit	Cost per Unit		Budget Calculations
Summer Kitchen Exterior Issues *continued*							
		Fabricate and deliver new sashes - double-hung and clere.	1	qty.	$ 7,657.06	qty.	$ 7,657.06
	X	Install new sashes in existing frames - double-hung	2	unit	$ 925	unit	$ 1,850.00
		Install new painted brickmould and sealant at exterior	1	qty.	$ 900	qty.	$ 900.00
		Paint exterior window finish per design for restor.	1	qty.	$ 600	qty.	$ 600.00
		Associated new finish work per window design - see inter.	1	qty.	$ 360	qty.	$ 360.00
73		Refurbish exterior doors and frames					
		Remove and store existing door slabs, hardware	2	opening	$ 260	opening	$ 520.00
		Restore existing hardware - remove, strip, reclad, and reinst.	1	qty.	$ 1,420	qty.	$ 1,420.00
		Conserve, refurbish, strip and repaint existing door slabs	1	qty.	$ 1,600	qty.	$ 1,600.00
		Re-construct frames to match historic design at exterior	2	opening	$ 780	opening	$ 1,560.00
		Re-install conserved existing slabs in re-constructed frame	2	opening	$ 1,560	opening	$ 3,120.00
vs.	X	Remove and replace existing door slabs with new hardware	2	opening	$ 2,430	opening	$ 4,860.00
		Paint new door slabs and frames per design for restoration	2	opening	$ 385	opening	$ 770.00
74		Tuckpoint and repair south-facing brick masonry					
		Remove and replace cracked brick units - west end of elev.	1	qty.	$ 2,000	qty.	$ 2,000.00
		Cut-out and install rod and sanded sealant at cracks	1	qty.	$ 1,450	qty.	$ 1,450.00
		Cut-out and install rod and sealant at misc. wood trim	1	qty.	$ 1,150	qty.	$ 1,150.00
vs.	X	Cut-out and tuckpoint solid with type 'N' or softer	1	qty.	$ 2,900	qty.	$ 2,900.00
75		Tuckpoint and repair east-facing brick masonry					
		Cut-out and point misc. open joints with type 'N' or softer	1	qty.	$ 1,450	qty.	$ 1,450.00
vs.	X	Cut-out and tuckpoint solid with type 'N' or softer	1	qty.	$ 2,300	qty.	$ 2,300.00
76		Tuckpoint and repair north-facing brick masonry					
		Remove and replace cracked brick units - west end of elev.	1	qty.	$ 2,000	qty.	$ 2,000.00
		Cut-out and install rod and sanded sealant at cracks	1	qty.	$ 1,150	qty.	$ 1,150.00
vs.	X	Cut-out and tuckpoint solid with type 'N' or softer	1	qty.	$ 2,900	qty.	$ 2,900.00
77		Tuckpoint and repair west-facing brick masonry					
		Cut-out and point misc. open joints with type 'N' or softer	1	qty.	$ 2,050	qty.	$ 2,050.00
vs.	X	Cut-out and tuckpoint solid with type 'N' or softer	1	qty.	$ 2,300	qty.	$ 2,300.00
78		Refurbish exterior of stone masonry foundation					
	2	Cut-out and install rod and sealant at cracks	1	qty.	$ 500	qty.	$ 500.00
	2	Cut-out and point solid with type 'M' in raised joints - grade +	1	qty.	$ 1,150	qty.	$ 1,150.00
79		Apply clear seal coat at exterior brick masonry					
	4	Clean and seal exterior brick masonry - all elevations	1	qty.	$ 1,026	qty.	$ 1,026.00
80		Paint brick masonry					
	X	Clean, prepare, prime, and paint exposed clay brick per des.	1	qty.	$ 1,400	qty.	$ 1,400.00
81		Refurbish south deck					
		Remove and replace miscellaneous rotten boards	1	qty.	$ 740	qty.	$ 740.00
		Refinish, close, and re-paint deck cladding	160	sq.ft.	$ 4.00	sq.ft.	$ 640.00
vs.		Demolish existing deck framing and cladding	1	qty.	$ 590	qty.	$ 590.00
	X	Reconstruct deck to match existing - re-use columns	1	qty.	$ 3,562	qty.	$ 3,562.00
		Install new removable walk-surface protection at main path	1	qty.	$ 950	qty.	$ 950.00
82		Line not used					
			0	qty.	$ -	qty.	$ -
83		Line not used					
			0	qty.	$ -	qty.	$ -

ARCHITECTURAL REPORT

	Line Item with General Notes	Quant.	Unit	Cost per Unit	Budget Calculations
	Summer Kitchen Interior Issues				
84	Install new hatch and access to attic space				
	Cut 24" sq. access in plaster ceiling and frame opening	1	qty.	$ 390 qty.	$ 390.00
	Fabricate and install painted access panel to match	1	qty.	$ 260 qty.	$ 260.00
	Install new hardware to operate and lock at access hatch	1	qty.	$ 460 qty.	$ 460.00
85	Augment insulation in attic level framing				
	Abandon existing insulation in place - assume minor prepara.	1	qty.	$ 500 qty.	$ 500.00
	Install R-30 insulation in attic framing level - rolls or blown	288	sq.ft.	$ 2.93 sq.ft.	$ 842.40
86	Install seismic bracing per design in attic floor framing system				
5	Access through roof sheathing per roofer / scaffold	0	qty.	$ - qty.	included with roof scp.
	Install seismic hanger from rafters to masonry bearing walls	1	qty.	$ 2,685 qty.	$ 2,685.33
87	Plaster refurbishment at wall cracks				
	Grind out and patch plaster at repaired cracks	1	qty.	$ 2,640 qty.	$ 2,640.00
X	Paint at plaster patches and repairs per design for restor.	1	qty.	$ 1,200 qty.	$ 1,200.00
	Summer Kitchen Systems Issues				
88	Replace HVAC system and source ducting				
X	Install new exterior condensers and piping per design	0	unit	$ - unit	included with HH reno.
	Install new interior high efficiency furnace and humidifier	0	unit	$ - unit	included with HH reno.
89	Terminate underground ducting to Summer Kitchen				
	Abandon and cap supply and return ducting to SK per design	0	qty.	$ - qty.	included with HH reno.
90	Replace HVAC controls				
	Install new three-zone control in single panel	0	qty.	$ - qty.	included with HH reno.
	Locate panel per design and install remote T-stats (in zones)	0	qty.	$ - qty.	included with HH reno.
91	Replace in-wall electrical conductors and outlets				
	Install new conduit from new service to Summer Kitchen	1	qty.	$ 1,360 qty.	$ 1,360.00
	Install new conductors from new panel to receptacle loc.s	1	qty.	$ 1,122 qty.	$ 1,122.00
	Install new receptacle devices with grounded leg	1	qty.	$ 596 qty.	$ 596.00
	Install new switch and control devices	1	qty.	$ 363 qty.	$ 362.50
92	Augment electrical egress lighting system per code				
	Install new circuits at new panel for expanded lighting design	1	qty.	$ - qty.	included with below
	Install new exit lighting fixtures per code	1	qty.	$ 780 qty.	$ 780.00
	Install new emergency lighting fixtures per code	1	qty.	$ 1,150 qty.	$ 1,150.00
93	Augment fire alarm system per code				
	Install new circuits at new panel for fire alarm system	1	qty.	$ - qty.	included with below
X	Install new detection and notification devices per code	1	qty.	$ 2,080 qty.	$ 2,080.00
94	Reconfigure lawn sprinkler system heads				
	Re-orient as required to eliminate impact on exterior brick	0	qty.	$ - qty.	included with HH reno.
95	Route-out below-grade storm water lines				
	Scope and clear all below-grade storm water lines	0	qty.	$ - qty.	included with HH reno.
	Verify function of all lines with camera - locate faults	0	qty.	$ - qty.	included with HH reno.
96	Test and balance HVAC system				
	Per HVAC design and space function - with report	0	qty.	$ - qty.	included with HH reno.
97	Install new automatic pre-action fire suppression system				
		1	qty.	$ - qty.	included with HH reno.

ARCHITECTURAL REPORT

Category Summary			Budget Estimate Total
HANLEY HOUSE			
High Priority Assessment Scope Construction Cost Estimate		$	419,054.23
* *Addresses all recommended Architectural, Structural, and MEP/FP Systems issues at **Hanley House** only*			
Medium Priority Assessment Scope Construction Cost Estimate		$	255,592.33
* *Addresses all recommended Architectural, Structural, and MEP/FP Systems issues at **Hanley House** only*			
Low Priority Assessment Scope Construction Cost Estimate	+	$	112,318.70
* *Addresses all recommended Architectural, Structural, and MEP/FP Systems issues at **Hanley House** only*			
SUMMER KITCHEN			
High Priority Assessment Scope Construction Cost Estimate		$	41,387.51
* *Addresses all recommended Architectural, Structural, and MEP/FP Systems issues at **Summer Kitchen** only*			
Medium Priority Assessment Scope Construction Cost Estimate		$	47,574.56
* *Addresses all recommended Architectural, Structural, and MEP/FP Systems issues at **Summer Kitchen** only*			
Low Priority Assessment Scope Construction Cost Estimate	+	$	16,087.00
* *Addresses all recommended Architectural, Structural, and MEP/FP Systems issues at **Summer Kitchen** only*			
Aggregate Prioritized Assessment Scope Construction Cost Estimate		$	892,014.34
* *Addresses all recommended Architectural, Structural, and MEP/FP Systems issues at **Hanley House** and **Summer Kitchen***			
Project Overhead, Fee, and General Conditions Cost Estimate		$	258,684.16
a *Field Supervision and General Contractor's Project Manager / Overhead Expense*		$	133,802.15
b *General Contractor's Profit and Fee*		$	89,201.43
c *Performance & Payment and Labor & Material Bonds*		$	17,840.29
d *Permits and Liability Insurance*		$	17,840.29
e *Builder's Risk Insurance (Project Specific)*		*Excluded from estimate - assumed by Owner*	
Project Design Cost Estimate		$	97,011.33
a *Architect / Lead Consultant*		$	14,500.00
b *Architect / Lead Consultant*		$	62,441.00
c *Structural Engineer*		$	8,920.14
d *MEP/FP Engineer*		$	11,150.18
Construction Scope Contingency	+	$	62,441.00
* *7% of Aggregate Prioritized Assessment Scope Cost Estimate*			
Grand Total Assessment Scope Construction Cost Estimate		$	1,310,150.82
* *Addresses all recommended construction hard and soft cost for prioritized assessed issues at **Hanley House** and **Summer Kitchen***			

Tennill & Associates, Inc.

CONSULTING ENGINEERS
177 Chesterfield Industrial Boulevard
Chesterfield, MO 63005-1219
Phone: (636) 537-3999
Fax: (636) 537-3998
Email: dwilson@tennill.net

July 6, 2007
REVISED July 9, 2007

Mr. Joshua Mandell
The Lawrence Group
319 North 4th Street, Ste. 1000
St. Louis, MO 63102

RE: The Hanley House
Preliminary Report
T&A Job # 07210

Dear Josh:

PLUMBING:

Existing Conditions:

- The existing water service (1" copper) enters the building in the northwest corner of the basement
- The service splits into a domestic service and a lawn sprinkler service. There is a pressure booster pump on the service to the lawn sprinkler system that is energized when the sprinkler system is activated. It is unknown if the pump is operational.
- The domestic service serves one private toilet in the basement, and a stainless steel sink installed in casework in the basement.
- There is a 30 gallon electric water heater installed in the basement that serves the fixtures referenced above.

Recommendations:

- All of the below floor waste piping should be replaced to outside of the building.
- The water heater should be replaced, sized to serve the future plumbing fixtures.

- All of the existing plumbing fixtures should be replaced, lay-out to be determined.

FIRE PROTECTION:

- There is currently no fire suppression system in the building

HVAC:

Existing Conditions:

- There are currently two gas fired furnaces with DX cooling located in the basement.

- One unit serves the first floor, and the other unit serves the second floor, and has a duct extended below grade to the kitchen building. There is one thermostat on the first floor, and one on the second floor.

- The condensing units are water cooled, located in the basement adjacent to the furnaces. The cooling water is discharged into floor drains in the basement.

Recommendations:

- Due to the age and condition of the HVAC equipment, we recommend it be replaced as follows:

    a. One gas fired furnace with DX cooling to replace the unit that serves the first floor.

    b. One gas fired furnace with DX cooling to replace the unit that serves the second floor.

    c. One gas fired furnace with DX cooling to serve the kitchen building.

    d. Three condensing units could be located on the west end of the kitchen building to minimize the sound from the units. The refrigerant piping to connect to the units in the basement of the house could be buried.

    e. New thermostats should be installed for the new furnaces.

    f. The exact system configurations and controls will depend upon the final usage of the building.

ELECTRICAL:

Existing Conditions:

- The building is served by a pole mounted transformer located in the alley to the south of the building.
- The service runs underground to a 200 amp panel located in the basement.
- The current service is not code compliant since it has no main disconnect.

Recommendations:

- The existing electrical service should be upgraded to a minimum of 400 amps with a main disconnect switch.
- Remove all cloth covered wiring still in use; replace with MC cable or wiring in conduit.
- Remove all exposed wiring and replace with MC cable or wiring in conduit.
- Replace all existing receptacles and switches with new.
- Relocate electrical meter to the exterior of the building to meet Ameren UE requirements.
- If the building is to be used as a public space, exit and egress lighting will be required at each exit.
- Depending upon building usage a fire alarm system may be required.

David A. Wilson, P.E.
et al

IBRAHIM ENGINEERING CORPORATION
STRUCTURAL ENGINEERS

MOHAMMED IBRAHIM, P.E., S.E., Pres.

PAUL J. ROWLANDS, P.E., Assoc.
DENNIS M. WEINHOLD, P.E., S.E.
ERIC A. HYDE, P.E.
DAVID YIQUAN SHA, P.E., S.E.

July 16, 2007

Mr. Joshua Mandell
The Lawrence Group
314 N 4th Street
St. Louis, Missouri

RE: Hanley House Evaluation
Clayton, Missouri
IEC 07165

Dear Joshua:

Per your request, we met on Tuesday June 19, 2007, at the above referenced project to review the structural conditions of the building.

The house layout is a double-loaded corridor with two rooms on each side of a central hallway with stairs. The house has a basement, first floor at approximate grade level and a second floor.

The building was constructed ca. 1855. The roof is 2x rafter framed setting on an exterior multiwythe brick wall. The first floor is wood framed with 2x12 full dimensional lumber at 16 o.c. from exterior stone foundation to an interior stone foundation wall on one side and exterior stone foundation wall to interior header system (wood assumed) setting on brick pilasters. The second floor is assumed to be framed from exterior multiwythe brick wall to interior wood framed walls. The roof framing appears to sit on the same walls as the occupied floors framing bearing.

There is both a front and rear porch. Per our discussion the porches are believed to have been rebuilt during the last renovation in the 1970's. At the same time, the basement was modified to add a bathroom, office area and mechanical room for heating and air conditioning. Per renovation documents, it appears that an interior stone foundation wall was removed and replaced with a wood (or possibly steel) header on brick piers. Part of the wall is infill with cmu offset from the headers and brick pilasters. There was a nonbearing cmu plumbing chase wall offset from the stone foundation wall.

BASEMENT

The basement foundation wall is a rubble stone with grouted joints. Some of the grout is deteriorated on the inside. There appears to be a water has leak thru the existing stone foundation wall behind the cmu plumbing wall; the floor is wet from behind the wall. (This wall is under part of the front porch.)

11500 OLIVE BOULEVARD **ST. LOUIS, MO 63141** **FAX (314) 567 6158** **(314) 567-0196**

RE: Hanley House Evaluation
Clayton, Missouri
IEC 07165

Basement (cont'd)

The basement floor on the South side is compacted dirt, with signs of having been disturbed in order to install a floor drain ca. 1970 or previous. The corridor and North side is concrete. The concrete floor slab appears to have been lowered since part of the existing foundation appears above the floor slab. This was required to provide minimum headroom clearance between floor and framing above.

The north side corridor walls appear to have been a continuous stone foundation wall similar to existing. It appears the 1970's renovation removed the wall and replaced it with a wood (or steel) header and brick pier construction. The headers are enclosed in gypsum sheathing but the width of the box out is narrower than the header in the remaining stone foundation wall.

Since the north basement corridor wall was a stone foundation and portions of it remain underneath clay brick piers, it is difficult to see if an interior foundation wall was removed prior to installation of said brick piers.

There are two existing crack monitoring gauges that haven been abandoned that appeared to be monitoring existing cracks that were repaired some time ago. One is on the exterior of the north wall, above the NE clerestory window opening, while the other is on the exterior of the east wall about 4 feet south of the NE corner. One gauge appears to be in somewhat of working order but it may be useless since there is no basis of how far the crack has widened and in what time period. The other is broken with the gauge slide cover missing.

The existing wood floor framing appears to be in good condition for the age of the structure. There does not appear to be any major cracking or splitting of the wood. Some joists have been repaired by doubling; presumably this was done ca. 1970 as well.

The clay brick window headers on the north side appear to be rotting while the south side headers at first floor (and the SE clerestory) have been replaced with steel angle headers. The two clerestory window openings on the north side of the house also have steel angle headers.

In Ibrahim Engineering Corporation's opinion, existing basement foundation wall should have mortar that has deteriorated be replaced on both the inside and outside face of the wall. The exterior should be done in sections of approximately 6 feet so that the whole foundation is not exposed at one time. A waterproof membrane would help prevent water penetration, as would a drain tile and sump pump system.

RE: Hanley House Evaluation
Clayton, Missouri
IEC 07165

First Floor

The floor system is uneven. The floor appears to slope towards the corridor walls. This is probably from the age of the building and the interior double stone wall / header bearing design. The uneven floor does cause problems for the sliding pocket doors that divide the two rooms on each side. However, this appears to have been remedied in renovation ca. 1970 or previous.

For the rooms on the south side of the house, the east wall of the front room had 2 diagonal cracks beginning at the top of the window and running diagonal to the ceiling above. The south wall of the back room has a diagonal crack over the fireplace running from left to right from top of opening to ceiling above. The floor seems to sag under the sliding door.

For the rooms on the north side of the house, the front room east wall has some cracks at the window and the north wall has cracking at the offset of the fireplace.

Second Floor

The floor system is uneven. There are some minor cracking in the walls near the windows for both sides of the house. The corridor ceiling has cracks the runs the full width at the approximate location of some roof framing reinforcing done during the renovation;

The North side front room ceiling is cracked in a spider web pattern in all directions.

ROOF FRAMING

The existing roof appears to be in good shape from the pictures you showed me. The existing roof was reinforced during the renovation to support the additional weight of slate shingles that were added. The renovation installed roof rafters between the existing rafters which were 4’-0” o.c and a knee wall was added approximately 8 feet from the West and East exterior walls. The knee wall is supported by a double header over the bedrooms and a single header over the corridor.

It is unknown if posts to the foundation were installed in the corridor walls at the ends of header

RE: Hanley House Evaluation
Clayton, Missouri
IEC 07165

EXTERIOR

There are wood framed porches at both the front and rear of the house. There are minor wood damage from use and some rotting. Parts of the porches could use a coat of paint.

NORTH SIDE

The door to the basement is starting to rot away.
The window headers over the basement windows are rotting away.
There has been some tuck pointing of the existing wall in portions.
There are cracks in the exterior wythe above the second floor windows. These cracks appear at a seam location of the diagonal downspout.

SOUTH SIDE

The window headers above the basement windows have been previously replaced with steel lintels.
There has been some tuck pointing of the existing wall in portions.
There are cracks in the exterior wythe above the second floor windows. These cracks appear at a joint location of the diagonal downspout.
There is an arched scraping of the brick veneer in the brick towards the front of the house. Opinion is there was a tree at some time that rubbed against the brick.
There were some areas of tuck pointing in the existing wall and the wall was rebuilt above the basement window openings when the lintels were replaced.

EAST SIDE

This is front of the house with a wood porch attached.

There are some areas of tuck pointing around the windows and some bricks appeared to have been replaced.

There are some locations above the entry door that require painting but are hard to reach over the door moldings which is not tight to the porch framing.

WEST SIDE

This is the rear of the house which has a wood framed porch with elevated floor for second floor access.

The brick does show signs of deterioration, although it is protected by the overhanging porch.

RE: Hanley House Evaluation
Clayton, Missouri
IEC 07165

SEISMIC DESIGN

The existing building does not meet any seismic code. The building cannot be reinforced to the seismic requirements of governing IBC 2003 Building code without installing shear walls inside the existing multiwythe brick walls;.

Ibrahim Engineering recommends that specific ties between the exterior multiwythe brick bearing wall be tied to the floor and roof deck. The ties consist of an angle or wood blocking that is nailed to the floor deck and epoxied grouted into the multiwythe walls. At the roof level wood blocking is installed between the roof rafters and wood top plate at wood stud bearing walls. The end rafter would be epoxy anchored to the Multiwythe brick wall.

This would provide some additional tie mechanism so that the roof rafter and floor joists would be partially held in place at the bearing end.

Again, this would not bring the building up to building code standards.

FLOOR DEFLECTION

With the multiple bearing conditions of the floor joists, a differential settlement between sides of the house can be expected. The amount of the differential settlement is not predictable. Engineering judgment would be the deflection of the floor headers in the basement would be higher than the original stone foundation wall.

Given the age of the house, soil settlement is anticipated and assumed to have occurred completely by present, with minimal or no continued settlement into the future. This does not rule out continued settlement due to adverse actions below grade, however, such as poor drainage, broken sewer piping, seismic events, etc. A system of piers or other foundation underpinning might be advantageous in order to secure the foundation in some areas such as the center east and the SW corner when brick masonry has deteriorated and cracked over long lines.

Some of the sloping of the floors joists could be from a differential settlement of the original foundations.

SETTLEMENT CRACKS

The cracks in the multiwythe brick exterior wall can be from several sources. The vertical stiffness change between the window header and the adjacent wall. Along with the increased wall thickness at the fireplace locations.

RE: Hanley House Evaluation
Clayton, Missouri
IEC 07165

Since the cap of the north and south walls is soldier course of brick, over the years water could be seeping into the multiwythe wall and the moisture is freezing inside the all exerting a horizontal force as the moisture expands under freezing cycles.

Install an acceptable material coating at the cap level to seal water penetration into the wall.

ROOF SYSTEM

The load capacity of the reinforced roof system is not part of this report. The actual capacity could be determined thru structural analysis of the present system.

Ibrahim Engineering Corporation's opinion is that any roof replacement increasing the dead load on the roof should have a structural analysis performed. Also, a structural analysis of the existing roof could be performed to determine the load capacity and necessary demolition to determine if a wood post was installed in the interior corridor walls under the reinforcing headers that were installed during the 1970's renovation.

Ibrahim Engineering Corporation's opinion is the existing roof reinforcing header point load at the present loading does not overstress the multiwythe brick wall. A bearing angle and connection of the header to the bearing angles should be considered to keep the headers in place and distribute the load over a longer length.

REPLACEMENT OF WINDOW LINTELS

At the time of the renovation the lintels that were replaced may have replaced due to the condition of the existing wood lintel. There could have been a cost constraint on the renovation.

At the time and for renovations done now, the usual practice is to only replace or repair only necessary items that require it now.

I trust this is the information you need at this time. Please call if you have any questions.

Sincerely,
Ibrahim Engineering Corporation

Dennis M. Weinhold, P.E.

Building Assessment Study
City of Clayton

July 16, 2007

Martin Franklin Hanley House
7600 Westmoreland Avenue
Clayton, Missouri 63105

LAWRENCE GROUP

Main Electrical Panel

Circuit Number	Service Description	Notes	Circuit Number	Service Description	Notes
1	**BLANK** (Knock-out)		2	**BLANK** (Knock-out)	
3	**60-Amp Breaker** - serves?		4	**30-Amp Breaker** - serves?	
5			6		
7	**30-Amp Breaker** - Second-floor level Hanley House and Summer Kitchen AC / Furnace		8	**15-Amp** - serves?	
9			10	**BLANK** (Knock-out)	
11	**30-Amp Breaker** - First-floor level Hanley House AC / Furnace		12	**BLANK** (Knock-out)	
13			14	**BLANK** (Knock-out)	
15	**15-Amp** - serves?		16	**BLANK** (Knock-out)	
17	**15-Amp** - serves?		18	**BLANK** (Knock-out)	
19	**15-Amp** - serves?		20	**BLANK** (Knock-out)	
21	**15-Amp** - serves?		22	**BLANK** (Knock-out)	
23	**15-Amp** - serves?		24	**BLANK** (Knock-out)	
25	**15-Amp** - serves?		26	**20-Amp** - serves?	
27	**20-Amp** - serves?		28	**BLANK** (Knock-out)	
29	**15-Amp** - serves?		30	**BLANK** (Knock-out)	

Old World Roofing
5800 Pernod
St Louis, MO 63139
(314) 966-7916

SLATE & TILE SPECIALISTS

Proposal

Date	Number
7/5/2007	1379

Name / Address	Location
Lawrence Group Architects 319 N 4th Street, Suite 1000 Saint Louis MO 63102	Martin Franklin Hanley House 7600 Westmoreland Saint Louis MO 63105

Description
Replace asbestos shingle roofs at the above address in the following manner: Tear off asbestos shingle roofing from all areas of the house and haul away. Tear off all layers of felt paper down to the wood deck and haul away. Remove all damaged flashing and haul away. Inspect, repair, and re-nail any decking boards as needed. Sweep deck clean of all debris. Install one (1) layer of ice and water shield at the eave line. Install one (1) layer of 45lb. felt paper to all exposed roof areas of the house. Fabricate and install new 16 oz. copper flashing in all valley junctions, at all vertical wall junctions, and around the perimeter of all chimneys. Install new 2 1/2 lb. lead flanges over all vent pipes. *Existing air vent on rear of the house will be re-used. Furnish and install a new fire-retardant heavy Certi-Split shake. New shake roof will be installed in strict accordance with the manufacturer's written specifications. All shakes will be secured with two (2) 1 3/4" copper nails per shake.

Total

Signature _____

All material is guaranteed to be specified. All work to be completed in a workmanlike manner according to standard practices. Any alterations or deviations from above specifications involving other cost will be executed only upon written orders, and will become an extra charge over and above the estimate. All agreements contingent upon strikes, accidents or delays beyond our control. Owner to carry fire, tornado and other necessary insurance. Our workers are fully covered by Workmen's Compensation Insurance. Any defective decking will be replaced on a time and material basis.

Acceptance of Proposal _____

Old World Roofing
5800 Pernod
St Louis, MO 63139
(314) 966-7916

SLATE & TILE SPECIALISTS

Proposal

Date	Number
7/5/2007	1379

Name / Address	Location
Lawrence Group Architects 319 N 4th Street, Suite 1000 Saint Louis MO 63102	Martin Franklin Hanley House 7600 Westmoreland Saint Louis MO 63105

Description
Labor, material, insurance, and removal of all rubbish daily for the sum of $59,051.00. This work carries a full ten (10) year guarantee against any leaks or defects in this work. Mr. Mandell, at your request I will have my insurance agent send you a current certificate of insurance outlining the coverage we carry. This proposal may be withdrawn if not accepted within thirty (30) days.

Total **$59,051.00**

Signature _____

All material is guaranteed to be specified. All work to be completed in a workmanlike manner according to standard practices. Any alterations or deviations from above specifications involving other cost will be executed only upon written orders, and will become an extra charge over and above the estimate. All agreements contingent upon strikes, accidents or delays beyond our control. Owner to carry fire, tornado and other necessary insurance. Our workers are fully covered by Workmen's Compensation Insurance. Any defective decking will be replaced on a time and material basis.

Acceptance of Proposal _____

Old World Roofing

5800 Pernod
St Louis, MO 63139
(314) 966-7916

SLATE & TILE SPECIALISTS

Proposal

Date	Number
7/5/2007	1381

Name / Address	Location
Lawrence Group Architects 319 N 4th Street, Suite 1000 Saint Louis MO 63102	Martin Franklin Hanley House 7600 Westmoreland Saint Louis MO 63105

Description	Cost	Total
Thirty-six (36) sq. of heavy shake roofing material (including starters and ridge caps) delivered to the jobsite:	10,294.00	10,294.00
Eighteen (18) rolls of 45 lb. felt paper and nails:	702.00	702.00
Four (4) rolls of ice and water shield:	272.00	272.00
One hundred twenty-five (125) lbs. of 1 3/4" copper nails:	988.00	988.00
Lead flanges and copper flashing:	2,508.00	2,508.00
Wood lathe and plastic cement:	365.00	365.00
Removal of all rubbish:	1,200.00	1,200.00
Misc. material and Safeway scaffold rental:	1,250.00	1,250.00
Labor for all slate and copper work at twelve (12) hours per sq. and $96.00 per hour:	41,472.00	41,472.00

Total **$59,051.00**

All material is guaranteed to be specified. All work to be completed in a workmanlike manner according to standard practices. Any alterations or deviations from above specifications involving other cost will be executed only upon written orders, and will become an extra charge over and above the estimate. All agreements contingent upon strikes, accidents or delays beyond our control. Owner to carry fire, tornado and other necessary insurance. Our workers are fully covered by Workmen's Compensation Insurance. Any defective decking will be replaced on a time and material basis.

Acceptance of Proposal _____

Old World Roofing
5800 Pernod
St Louis, MO 63139
(314) 966-7916

SLATE & TILE SPECIALISTS

Proposal

Date	Number
7/3/2007	1377

Name / Address	Location
Lawrence Group Architects 319 N 4th Street, Suite 1000 Saint Louis MO 63102	Martin Franklin Hanley House 7600 Westmoreland Saint Louis MO 63105

Description
Replace asbestos shingle roofs at the above address in the following manner: Tear off asbestos shingle roofing from all areas of the house and haul away. Tear off all layers of felt paper down to the wood deck and haul away. Remove all damaged flashing and haul away. Inspect, repair, and re-nail any decking boards as needed. Sweep deck clean of all debris. Install one (1) layer of ice and water shield at the eave line. Install one (1) layer of 45lb. felt paper to all exposed roof areas of the house. Fabricate and install new 16 oz. copper flashing in all valley junctions, at all vertical wall junctions, and around the perimeter of all chimneys. Install new 2 1/2 lb. lead flanges over all vent pipes. *Existing air vent on rear of the house will be re-used. Furnish and install a new fire-retardant medium Certi-Split shake. New shake roof will be installed in strict accordance with the manufacturer's written specifications. All shakes will be secured with two (2) 1 3/4" copper nails per shake.

Signature _____

Total

All material is guaranteed to be specified. All work to be completed in a workmanlike manner according to standard practices. Any alterations or deviations from above specifications involving other cost will be executed only upon written orders, and will become an extra charge over and above the estimate. All agreements contingent upon strikes, accidents or delays beyond our control. Owner to carry fire, tornado and other necessary insurance. Our workers are fully covered by Workmen's Compensation Insurance. Any defective decking will be replaced on a time and material basis.

Acceptance of Proposal _____

Old World Roofing
5800 Pernod
St Louis, MO 63139
(314) 966-7916

Proposal

Date	Number
7/3/2007	1377

Name / Address	Location
Lawrence Group Architects 319 N 4th Street, Suite 1000 Saint Louis MO 63102	Martin Franklin Hanley House 7600 Westmoreland Saint Louis MO 63105

Description
Labor, material, insurance, and removal of all rubbish daily for the sum of $58,331.00. This work carries a full ten (10) year guarantee against any leaks or defects in this work. Mr. Mandell, at your request I will have my insurance agent send you a current certificate of insurance outlining the coverage we carry. This proposal may be withdrawn if not accepted within thirty (30) days.

Total **$58,331.00**

Signature _____

All material is guaranteed to be specified. All work to be completed in a workmanlike manner according to standard practices. Any alterations or deviations from above specifications involving other cost will be executed only upon written orders, and will become an extra charge over and above the estimate. All agreements contingent upon strikes, accidents or delays beyond our control. Owner to carry fire, tornado and other necessary insurance. Our workers are fully covered by Workmen's Compensation Insurance. Any defective decking will be replaced on a time and material basis.

Acceptance of Proposal _____

Old World Roofing

5800 Pernod
St Louis, MO 63139
(314) 966-7916

Old World Roofing Co.
SLATE & TILE SPECIALISTS

Proposal

Date	Number
7/5/2007	1380

Name / Address	Location
Lawrence Group Architects 319 N 4th Street, Suite 1000 Saint Louis MO 63102	Martin Franklin Hanley House 7600 Westmoreland Saint Louis MO 63105

Description	Cost	Total
Thirty-six (36) sq. of medium shake roofing material (including starters and ridge caps) delivered to the jobsite:	9,574.00	9,574.00
Eighteen (18) rolls of 45 lb. felt paper and nails:	702.00	702.00
Four rolls of ice and water shield:	272.00	272.00
One hundred twenty-five (125) lbs. of 1 3/4" copper nails:	988.00	988.00
Lead flanges and copper flashing:	2,508.00	2,508.00
Wood lathe and plastic cement:	365.00	365.00
Removal of all rubbish:	1,200.00	1,200.00
Misc. material and Safeway scaffold rental:	1,250.00	1,250.00
Labor for all shake and copper work at twelve (12) hours per sq. and $96.00 per hour:	41,472.00	41,472.00

Total **$58,331.00**

All material is guaranteed to be specified. All work to be completed in a workmanlike manner according to standard practices. Any alterations or deviations from above specifications involving other cost will be executed only upon written orders, and will become an extra charge over and above the estimate. All agreements contingent upon strikes, accidents or delays beyond our control. Owner to carry fire, tornado and other necessary insurance. Our workers are fully covered by Workmen's Compensation Insurance. Any defective decking will be replaced on a time and material basis.

Acceptance of Proposal _____

Old World Roofing
5800 Pernod
St Louis, MO 63139
(314) 966-7916

Proposal

Date	Number
7/3/2007	1376

Name / Address	Location
Lawrence Group Architects 319 N 4th Street, Suite 1000 Saint Louis MO 63102	Martin Franklin Hanley House 7600 Westmoreland Saint Louis MO 63105

Description
Replace asbestos shingle roofs at the above address in the following manner: Tear off asbestos shingle roofing from all areas of the house and haul away. Tear off all layers of felt paper down to the wood deck and haul away. Remove all damaged flashing and haul away. Inspect, repair, and re-nail any decking boards as needed. Sweep deck clean of all debris. Install one (1) layer of ice and water shield at the eave line. Install one (1) layer of 45lb. felt paper to all exposed roof areas of the house. Fabricate and install new 16 oz. copper flashing in all valley junctions, at all vertical wall junctions, and around the perimeter of all chimneys. Install new 2 1/2 lb. lead flanges over all vent pipes. *Existing air vent on rear of the house will be re-used. Furnish and install a new unfading green slate roof. New slate roof will be installed in strict accordance with the manufacturer's written specifications. All slate will be secured with two (2) 1 3/4" copper nails per slate.

Total

Signature _____

All material is guaranteed to be specified. All work to be completed in a workmanlike manner according to standard practices. Any alterations or deviations from above specifications involving other cost will be executed only upon written orders, and will become an extra charge over and above the estimate. All agreements contingent upon strikes, accidents or delays beyond our control. Owner to carry fire, tornado and other necessary insurance. Our workers are fully covered by Workmen's Compensation Insurance. Any defective decking will be replaced on a time and material basis.

Acceptance of Proposal _____

Old World Roofing
5800 Pernod
St Louis, MO 63139
(314) 966-7916

Proposal

Date	Number
7/3/2007	1376

Name / Address	Location
Lawrence Group Architects 319 N 4th Street, Suite 1000 Saint Louis MO 63102	Martin Franklin Hanley House 7600 Westmoreland Saint Louis MO 63105

Description
Neatly seal all ridge junctions with plastic cement. Labor, material, insurance, and removal of all rubbish daily for the sum of $69,097.00. This work carries a full ten (10) year guarantee against any leaks or defects in this work. Mr. Mandell, at your request I will have my insurance agent send you a current certificate of insurance outlining the coverage we carry. Slate roofing material must be paid for within five (5) days of the delivery to the jobsite. Old World Roofing Co. will apply for a partial payment every two (2) weeks, based on the amount of work completed. This proposal may be withdrawn if not accepted within thirty (30) days.

Total **$69,097.00**

Signature _____

All material is guaranteed to be specified. All work to be completed in a workmanlike manner according to standard practices. Any alterations or deviations from above specifications involving other cost will be executed only upon written orders, and will become an extra charge over and above the estimate. All agreements contingent upon strikes, accidents or delays beyond our control. Owner to carry fire, tornado and other necessary insurance. Our workers are fully covered by Workmen's Compensation Insurance. Any defective decking will be replaced on a time and material basis.

Acceptance of Proposal _____

Old World Roofing

5800 Pernod
St Louis, MO 63139
(314) 966-7916

Old World Roofing Co.
SLATE & TILE SPECIALISTS

Proposal

Date	Number
7/3/2007	1378

Name / Address	Location
Lawrence Group Architects 319 N 4th Street, Suite 1000 Saint Louis MO 63102	Martin Franklin Hanley House 7600 Westmoreland Saint Louis MO 63105

Description	Cost	Total
Thirty-six (36) sq. of slate roofing material delivered to the jobsite:	20,340.00	20,340.00
Eighteen (18) rolls of 45 lb. felt paper and nails:	702.00	702.00
Four (4) rolls of ice and water shield:	272.00	272.00
One hundred twenty-five (125) lbs. of 1 3/4" copper nails:	988.00	988.00
Lead flanges and copper flashing:	2,508.00	2,508.00
Wood lathe and plastic cement:	365.00	365.00
Removal of all rubbish:	1,200.00	1,200.00
Misc. material and Safeway scaffold rental:	1,250.00	1,250.00
Labor for all slate and copper work at twelve (12) hours per sq. and $96.00 per hour:	41,472.00	41,472.00
	Total	**$69,097.00**

All material is guaranteed to be specified. All work to be completed in a workmanlike manner according to standard practices. Any alterations or deviations from above specifications involving other cost will be executed only upon written orders, and will become an extra charge over and above the estimate. All agreements contingent upon strikes, accidents or delays beyond our control. Owner to carry fire, tornado and other necessary insurance. Our workers are fully covered by Workmen's Compensation Insurance. Any defective decking will be replaced on a time and material basis.

Acceptance of Proposal _____

Contract # 18394

Quality Glass Tinting Inc.

232 Vance Rd. Suite #106 Saint Louis, MO 63088
Phone 636-391-3888
Fax 636-391-7984
www.quality-glasstint.com

The Lawrence Group		Joshua Mandell	6/12/07
		Contact Person	Date
319 N. 4th Street Suite #1000		9314) 231-5700	(314) 231-0876
Address		Phone	Fax
St. Louis, MO 63102		Hanley House	
City, State and Zip Code	Hours	Job Location	

Re ☐ De ☐ AD ☐ Y.P. ☐ Pr ☐ HS ☐ O ☐

DESCRIPTION OF PROJECT

Area	Exp.	W	H	Panes of Glass	Area	Exp.	W	H	Panes of Glass
South				48	$864.00				
Attic				12	$144.00				
				72	$1,296.00				
				48	$864.00				
				12	$144.00				
				96	$1,728.00				
Sidelights				12	$216.00				
				8	$144.00				

Film Type: H-50 Ladders ☐ Scaffold ☐ Lift ☐ Amount: $ **5,400.00**

Accepted By:

re)view™
The Complete Restoration of Historic Windows

1235 Saline Street
Kansas City, MO 64116
PH: 816-741-2876
FX: 816-746-9331
E-MAIL: brooks@re-view.biz
WEB: www.re-view.biz

Complete Source for Historic Windows

CONTACT: Brooks Gentleman
PH: 816-741-2876 **FX:** 816-746-9331
MO: 816-365-4447 **E-MAIL:** brooks@re-view.biz

DATE: July 2, 2007
PROJECT: Martin Franklin Hanley House
SECTION: 08592 – Historic Treatment of Wood Windows
TO: Josh Mandell
PHONE: 314-231-5700 **FAX: 314-231-0876**

ARCHITECT: Lawrence Group
LOCATION: Clayton, Missouri
ADDENDA:

BASE BID: **Restore Existing Historic Windows**
For the Sum of: $96,800 – Taxes Not Included

SCOPE:

- Remove existing sash and transport to the Re-View restoration facility. Install temporary enclosures.
- Remove all finishes and glazing from existing window sash careful to save as much original glass as possible.
- Repair deteriorated wood on window sash with liquid epoxies and epoxy fillers. Use wood Dutchmen for large section repairs with the same wood species.
- Sand sash smooth without removing wood profile.
- Finish interior and exterior surfaces of sash with oil based primer and two coats of finish paint. Interior and exterior finish colors to be determined by the architect.
- Glaze sash with original glass and replace broken glass with wavy restoration glass to match original. Glaze with glazing putty.
- Scrape loose paint from exterior and interior surfaces of the frames and trim.
- Remove finishes from the sill and up two inches on the jambs.
- Apply liquid epoxies and epoxy fillers to the frame, trim, and sills. Sand smooth.
- Apply an oil based primer and two coats of finish paint to the frame, trim, and sills.
- Install restored sash into the frame opening with new historic weather stripping.
- Provide and install new hardware to closely match the existing.
- Field measuring and shop drawings are included.
- F.O.B. Kansas City – delivery not included.

EXCLUSIONS:

- This bid does not include final cleaning of windows, doors, shutters, louvers, taxes, performance and payment bond, delivery charges.

ALTERNATE: **Add for Exterior Door Restoration**
For the Sum of: $32,800

Window Type	Opening Quantity
6/6 Window	26
3 Lite Basement Window	4
Ext Door with Sidelights	2
4 Panel Ext Door	4

The Marvin Window & Door Store

Marvin Window & Door Store
2714 Mercantile Dr
St Louis, Mo 63144
(314) 647-5000 Fax: (314) 647-3330
Sales Person: Dwayne Eitel
deitel@marvinstore.com
marvinstore.com

August 13, 2007

General Contractor

Project: 10400448A
Martin Franklin Hanley House
7600 Westmoreland
Clayton, MO 63105

PROPOSAL-BUDGET PRICING HISTORIC WEIGHT AND CHAIN DOUBLE HUNGS

The Marvin Window & Door Store hereby proposes to furnish all material as specified below:

Anticipated delivery of product to our warehouse 12-14 Weeks will be from the time that the order is placed.

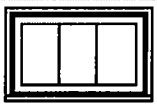
**Special Conditions:

Payment terms: _____50%deposit/50% COD_____

GENERAL PRODUCT SPECIFICATIONS EXCEPT AS NOTED BELOW

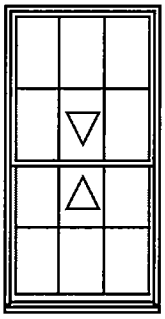
Manufacturer:	Marvin
Product Line:	Wood
Glass:	SG Reamy glass with laminated interior energy panel
Grille/Divided Lite Bar Type:	Authentic Divided Lite
Interior Finish:	Primed
Exterior Finish:	Primed
Interior Casing:	None
Exterior Casing:	None-SUPPLIED AND INSTALLED BY OTHERS
Jamb Depth:	10 9/16"
Screen:	None
Window Hardware:	Oil Rubbed Bronze

Item#: 1 Location: Basement Qty: 4 — **Unit Price: $492.48 Total: $1,969.92**



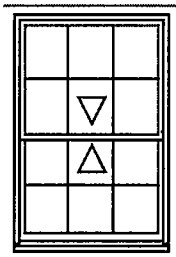
description: ultimate double hung transom
call #: custom
jamb depth: 10 9/16"
hardware: installed installation brackets
ext. finish: primed pine
bar pattern: 3 wide x 1 high
surface: wood
rough opening: 37 3/8" x 23 7/8"
glass: insulated glass
clear
int. finish: primed pine
bar type: 7/8" rectangular simulated divided lite with spacer bar

Item#: 2 Location: Main House W & C Qty: 22 — **Unit Price: $3,659.76 Total: $80,514.72**



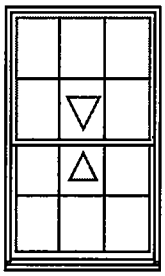
description: weight & chain double hung
call #: custom
jamb depth: 10 9/16"
hardware: SRB WD130 lock & keeper
int. finish: primed pine
bar type: authentic divided lite
int. casing: none
comment: oil rubbed bronze pulley/natural bronze chain
surface: wood
rough opening: 39 5/8" x 77 1/2"
glass: single glazed reamy glass
Sills: flush cut sill nosing
ext. finish: primed pine
bar pattern: 3 wide x 2 high
ext. casing: none
misc.: white interior energy panel 7/32" laminated glass

Item#: 3 Location: Gable End W & C Qty: 2 — **Unit Price: $3,358.80 Total: $6,717.60**



description: weight & chain double hung
call #: custom
jamb depth: 10 9/16"
hardware: SRB WD130 lock & keeper
int. finish: primed pine
bar type: authentic divided lite
int. casing: none
comment: oil rubbed bronze pulley/natural bronze chain
surface: wood
rough opening: 39 5/8" x 59 7/8"
glass: single glazed reamy glass
Sills: flush cut sill nosing
ext. finish: primed pine
bar pattern: 3 wide x 2 high
ext. casing: none
misc.: white interior energy panel 7/32" laminated glass

Item#: 4 Location: Summer Kitchen W & C Qty: 2 — **Unit Price: $3,480.48 Total: $6,960.96**



description: weight & chain double hung
call #: custom
jamb depth: 10 9/16"
hardware: SRB WD130 lock & keeper
int. finish: primed pine
bar type: authentic divided lite
int. casing: none
comment: oil rubbed bronze pulley/natural bronze chain
surface: wood
rough opening: 39 5/8" x 66 1/2"
glass: single glazed reamy glass
Sills: flush cut sill nosing
ext. finish: primed pine
bar pattern: 3 wide x 2 high
ext. casing: none
misc.: white interior energy panel 7/32" laminated glass

Item#: 5 Location: Set UP Qty: 1 — **Total: $98.64**

description: set up for historic sash profile
call #: custom

Total Material	$96,261.84
Tax Exempt:	$0.00
Grand Total	**$96,261.84**

Payment schedule terms

$48,130.92 deposit due upon acceptance
$48,130.92 deposit due upon delivery

1/4" = 1' 0" - All drawings are exterior views.

THIS PROPOSAL IS VALID FOR 30 DAYS

Acceptance Of Proposal

NOTICE TO OWNER

FAILURE OF THIS CONTRACTOR TO PAY THOSE PERSONS SUPPLYING MATERIALS OR SERVICES TO COMPLETE THIS CONTRACT CAN RESULT IN THE FILING OF A LIEN ON THE PROPERTY WHICH IS THE SUBJECT OF THIS CONTRACT PURSUANT TO CHAPTER 429, RSMo. TO AVOID THIS RESULT YOU MAY ASK THIS CONTRACTOR FOR "LIEN WAIVERS" FROM ALL PERSONS SUPPLYING MATERIAL OR SERVICES FOR THE WORK DESCRIBED IN THIS CONTRACT. FAILURE TO SECURE LIEN WAIVERS MAY RESULT IN YOUR PAYING FOR LABOR AND MATERIAL TWICE.

***THE ITEMS SPECIFIED ARE OFFERED SUBJECT TO THE FOLLOWING TERMS OF SALE:

1. The products ordered in this contract will be custom assembled and are not returnable. Orders can not be cancelled. Buyer should carefully check quantities, sizes, and specifications as buyer is responsible for accuracy thereof.

2. Buyer agrees to accept delivery of the products ordered in this contract within twenty-four hours after receipt of written or verbal notice from The Marvin Window & Door Store. The Marvin Window & Door Store may store products up to 30 days at the request of the buyer after which, The Marvin window & Door Store may add reasonable storage charges. This provision does not apply to product awaiting installation by the Marvin Window & Door Store.

3. The Marvin Window & Door Store is not responsible for determining whether the products covered by this contract meet local building codes including egress requirements, and security and safety glazing, except where The Marvin Window & Door Store is acting as the primary contractor.

4. The Marvin window & door store is not responsible for delays in shipment due to fire, accidents, shipment problems, manufacturers delays, labor problems or any other causes beyond its control.

5. Buyer agrees to check all products upon delivery and immediately report any shortage or damage to The Marvin Window & Door Store. Hidden damage to units must be reported within 30 days of delivery and hidden damage or shortage in boxed items must be reported within 6 months for claims to be considered.

6. If this contract provides for delivery of products to the buyer, it is understood and agreed that in the process of unloading products, the seller is only obligated to bring the product to the tailgate of the delivery vehicle, and the buyer agrees to accept and provide labor to promptly unload the products from that point. For Installed sales, The Marvin Window & Door Store installer may meet the delivery vehicle to provide unloading service, the customer agrees to provide adequate storage area with clear access to that area up to 48 hours prior to installation.

7. Product warranties. The Marvin Window & Door Store offers warranties per each manufacturers specified warranty. The Marvin Window & Door Store sells many different products and each manufacturer's warranty is different. You may request written manufacturer's warranties for each product. Occasionally, custom or over-sized products may be sold without warranty or with limited manufacturer's warranty which may require the buyer to sign a waiver.

8. Warranty Labor. The Marvin Window & Door Store will provide labor at no charge to replace or repair manufacturing defects, where the parts are provided at no cost by the manufacturer, for two years from the time of purchase. Labor will not include refinishing, painting or work other than repairing or replacement of the defective part.

9. Installation Warranties. The Marvin Window & Door Store offers a two year warranty on installation workmanship on all products installed by The Marvin Window & Door Store. The Marvin Window & Door Store does not warrant installation by others.

10. The Marvin Window & Door Store assumes no responsibility for glass damage or breakage after delivery of products to buyer. Marvin Window & door Store will furnish without charge upon request, during the warranty period, new parts determined to be defective by The Marvin Window & Door Store.

11. For jobs that include installation or other services, we may find hidden damage (rotted wood, termites, settlement, etc...) that we had not discovered or anticipated when planning or pricing your project. In the event that additional labor and materials are needed to complete your project in a professional manner, we will charge time and material costs in addition to your contract amount.

12. Marvin Window & Door Store shall recover reasonable attorney's fees, collection costs and court costs if payment is not promptly made. Buyer agrees to pay as liquidating damages a service charge of 1 1/2% per month (annual percentage rate of 18%) on past due balances outstanding at the end of each mo

IMPORTANT PRODUCT NOTES

A. Like many industries, ours has terminologies, signs and symbols which can be misunderstood by someone unfamiliar with them. Therefore, we ask that you request clarification of anything on the attached specification sheets that is not totally understood by you.

B. In Order to meet our scheduled delivery times, parts for your windows are being produced within 24 hours after we receive your order. Therefore, we ask that you be confident that you are ordering exactly what you want. Orders can not be changed or cancelled.

C. Wood products are manufactured with special accuracy. Accurate installation by installers skilled in this work is essential to assure satisfactory results that the products are designed to give.

D. Some wood products are delivered with no primer on the exterior. Failure to promptly apply an approved quality primer or sealer to all surfaces before the product is exposed to the weather will void any warranty. Wood products delivered with the exterior factory primer should receive two coats of pigmented paint or approved quality sealant within 30 days after installation. Failure to do so will void the warranty.

THE ABOVE PRICES, SPECIFICATIONS AND CONDITIONS ARE SATISFACTORY AND HEREBY ACCEPTED. ANY CHANGES OR MODIFICATIONS TO THIS CONTRACT MUST BE IN WRITING AND SIGNED BY BOTH PARTIES. THE MARVIN WINDOW & DOOR STORE IS AUTHORIZED TO PLACE ORDER AS SPECIFIED ABOVE.

Accepted: _____ _____

General Contractor Date

_____ _____

Dwayne Eitel Date

Sales Representative

INTERNATIONAL FIRE SPRINKLER, INC.
2551 Metro Blvd. St. Louis MO 63043

IFS

A FIRE PROTECTION CONTRACTOR
specializing in the
Design, Sales, Installation and Servicing
of All Types of Fire Protection and Special Hazard Systems

PHONE 314-991-3833
FAX 314-991-2803

Attn:	**Joshua Mandell**	
Company:	**Lawrence Group**	
Phone #:	**314.231-5700**	
Cell #:		
Fax #:	**314.231-0876**	
No. of Pages incl. cover sheet:		**2**

From:	**Kai Nickel**
Project:	**Hanley House**
Location:	**7600 Westmoreland Avenue**
	Clayton, MO 63105
IFS Job #:	
Date:	**August 9, 2007**

We propose to provide all the labor and material necessary to install a Pre-action Sprinkler System for the Hanley House at the above mentioned location.

Our **Budget Price** for this work would be: **One Hundred Ten Thousand and 00/100 Dollars, ($110,000.00).**

Scope Clarifications:

1. Our proposal price includes the necessary excavation, materials, and labor to run a dedicated fire sprinkler main from the city main to the building.
2. IFS would install a Pre-action Fire Sprinkler System that would protect all four levels including the attic space.
3. All openings in walls and or ceilings that would be necessary to install our piping would be cut and patched by others. It would be our intention to try and minimize the locations where walls would need to be opened, however this work would have to be performed before we could start our installation.
4. Dry sidewalls have been figured to protect under the canopies on both levels of both sides of the building exterior. We have not included protection inside the canopy cavity space that may need to be protected because of the combustible construction. However, the access to that space would be difficult to determine and could present a routing dilemma. It could be more cost affective to fill the cavities with insulation.
5. Our work would not include any of the necessary electrical wiring. We have included the price of the Viking Par-3 Control Panel. However, the price does not include the detection devices, corresponding alarm system, or any wiring or programming of such devices.

EMERGENCY SERVICE AVAILABLE 24 HOURS A DAY

6. Our price is based on receiving Reflected Ceiling Plans on CAD File at no cost to IFS.
7. The appropriate permit drawings and permit costs have been included in our proposal.

Work Not Included If Required:

1. Any overtime.
2. Electrical wiring of any sprinkler devices or alarms.
3. Fire extinguishers or cabinets.
4. Work involving hazardous materials.
5. Painting or identification of piping.
6. Rock excavation.
7. Sodding or seeding.
8. Utility relocation.

We trust that the aforementioned information is sufficient and assure our cooperation at all times.

Thank you,

Kai Nickel

THE CITY OF CLAYTON

DATE: July 17, 1969 Inter-Departmental Correspondence

TO: The Honorable Mayor and Members of the Board of Aldermen

FROM THE CITY MANAGER'S OFFICE

SUBJECT: Agenda Item - Ordinance to Approve Contract Between Joseph F. Schiermeier and the City of Clayton for Restoration Work on the Hanley House

An ordinance is being prepared to approve the attached contract, dated June 30, 1969, between Joseph F. Schiermeier, Contractor, and the City of Clayton to accomplish restoration work on the Hanley House at 7600 Westmoreland Avenue. Mr. Schiermeier's firm was recommended to the City by restoration architect, Gerhardt Kramer. Mr. Schiermeier was interviewed by the Chairman of the Restoration Committee, Mr. Roy W. Jordan, and the City Manager. His work at other restorations in the metropolitan area was reviewed and found acceptable by the Public Works Director and the City Manager.

Because of the uncertain nature of the extent of work involved in a restoration project of this type, it was felt best to employ a restoration contractor on a time and material basis: General plans and specifications have been developed by the restoration architect for work including the removal of wallpaper, re-roofing, exterior tuck pointing, installation of a heating and air-conditioning system and a new electrical system, the rebuilding of porches, the repairing of all woodwork, placing of insulation, and plumbing. The architect's estimate of the cost of labor and material for the above items is $33,000. Under the contract as written, the City is to reimburse Mr. Schiermeier for paid bills for labor and materials on a monthly basis. At the conclusion of the contract, Mr. Schiermeier is to be paid at the rate of 10% of the cost of labor and materials for his administration of the work. Thus, the attached contract is $36,300, including $33,000 for labor and materials and $3,300 as 10% for overhead and profit to the contractor.

It is anticipated that the contract will be revised from time to time as the work progresses to include additional floor refinishing, sheet metal work, exterior painting, hardware and plastering, estimated by the architect to cost an additional $8,525 (including the 10% fee to the contractor). Thus, at this time it is estimated that the work of the restoration contractor will approximate $44,825; it should also be anticipated that this figure may increase to approximately $50,000 for additional work presently unforeseen but which might evidence itself as restoration of this 114-year-old home proceeds. To date, $42,000 has been appropriated in last year's budget and this year's budget for the restoration work applicable to this contract.

Clifford R. James
City Manager

crj/mj
Attachment
Copy to: Mr. Roy W. Jordan

CONTRACT

THIS AGREEMENT, made the 30th day of June 1969, by and between Joseph F. Schiermeier, Contractor, 509 Washington, Florissant, Missouri, hereinafter called the Contractor, and the City of Clayton, Missouri, hereinafter called the Owner.

WITNESSETH, that the Contractor and the Owner for the consideration stated herein agree as follows:

ARTICLE I. STATEMENT OF WORK. The Contractor shall furnish all labor, materials and equipment required to accomplish the Restoration work which may be necessary and inferred from the general nature and tendency of the plans, specifications and Appendix "A" for the proper execution of work in Restoration of the Hanley House at 7600 Westmoreland Avenue, Clayton, Missouri, in strict accordance with the specifications and drawings prepared by Kramer and Harms, Architects, dated April 23, 1969, and Appendix "A", all of which are made a part hereof, and shall do everything required by this agreement, general conditions of the contract, specifications and drawings, and all other contract documents.

ARTICLE II. TIME OF COMPLETION: The work to be performed under this contract shall be commenced in accordance with the schedule determined by all parties mentioned in Appendix "A" of this agreement. Work shall be completed in accordance with a mutually agreeable schedule as determined by these parties.

ARTICLE III. CONTRACT SUM. The Owner shall pay the Contractor for the prompt, faithful and efficient performance of the conditions and undertakings of this contract in accordance with the terms as shown in the Paragraph entitled "Cost Allowances" Appendix "A" of this agreement.

ARTICLE IV. PREVAILING WAGE RATE. The Contractor and Sub-contractor shall agree to pay all workmen on this project not less than the prevailing hourly rate of wages for work of a similar character in the locality in

which this work is to be accomplished, and shall keep an accurate record showing also the actual wages paid to each of the workmen, in accordance with the provisions of House Bill 294, passed by the 1957 General Assembly and approved by the Governor of the State of Missouri.

ARTICLE V. CONTRACT DOCUMENTS. Contract documents shall consist of the following component parts:

1. Contract
2. Scope of Work
3. Drawings
4. Specifications
5. Appendix "A" of the Agreement
6. Prevailing Wage Rates

IN WITNESS WHEREOF, the above bounded parties have executed the within instruments this 30th day of June, 1969.

Clifford R. James
City Manager
City of Clayton

Joseph F. Schiermeier
Contractor

ATTEST:

City Clerk

APPENDIX "A"

TO: Contract for - Restoration Work in Restoration of Hanley House at 7600 Westmoreland Avenue, Clayton, Missouri.

SCOPE OF WORK: It is the intent of the contract to cover the entire work necessary to accomplish all Restoration so as to bring the Hanley House main building and kitchen, except for interior decoration, into a high degree of repair, basically as shown on plans and specifications as referred to in the contract, supplemented by further required detail plans and specifications to be prepared by Kramer and Harms, Architects. This work includes removal of wallpaper, reroofing, exterior tuckpointing, new heating and air conditioning systems, electrical system revision, rebuilding of porches, repair of all woodwork, insulation, and plumbing as shown on approved plans and specifications of Kramer and Harms, Architects, dated April 23, 1969.

SUPERVISION OF WORK: The Contractor shall perform all work subject to the supervision and specific control of Kramer and Harms, Architects, and the City Manager of the City of Clayton, Missouri.

CONTRACTOR'S WORK FORCE: The Contractor shall assign to the job a foreman who will also work as a carpenter, and shall be empowered to act in behalf of the Contractor. No work shall be performed unless the foreman is present on the site.

The Contractor shall pay all salaries, commissions, fees, welfare payments, payroll taxes, subcontractor costs, and such other obligations resulting from the employment necessary to accomplish the project. The City of Clayton shall not be liable for such obligations as aforementioned, nor any other liability which may accrue because of the actions or omissions of said work force.

ADMINISTRATION AND INSURANCE: The Contractor shall be responsible for the keeping of records and general administration of his work force. The Contractor shall submit to the City of Clayton at the end of each month, a certifided copy of his payroll records and requests for payment from subcontractors and major material men. Such records shall clearly and specifically indicate the following:

a. Employees' Names
b. Amount of Earnings of Each Employee
c. Trade Category of Each Employee
d. Numbers of Hours Worked by Each Employee, at the Site
e. Subcontract Costs
f. All Material Purchased

The aforementioned requirements shall be limited to the employees working at the site. Daily time and work records shall be verified and approved each month by the Architect and the Director of Finance of the City of Clayton. The Contractor shall maintain during the life of this contract Workmen's Compensation, Comprehensive General Liability Insurance in an amount of not less than $100,000 for each accident and an aggregate coverage of $300,000, and Property Damage Insurance in an amount of $75,000. All policies shall include a 15-day cancellation clause. The City of Clayton shall be named a co-insured on the policies covering such insurance. The Contractor shall also similarly insure the work of his sub-contractors or, in lieu thereof, provide certificates to the owner showing that they are so insured themselves. A certificate of the Contractor's required insurance must be furnished by the Contractor to the City upon execution of this contract.

REMOVAL OF SALVAGE MATERIALS: The Contractor shall provide a vehicle to remove all salvage materials from the site. No materials shall be removed from the site by the Contractor except after specific approval of the Architect or proper representatives of the City of Clayton.

COST ALLOWANCES: The City of Clayton shall pay to the Contractor once each month paid bills and wages for work performed on the project during the month next preceding the month in which payment is made in accord with the prevailing wage rates as included in the contract documents, as follows:

a. Union labor or equivalent - payroll and employee benefits plus payroll insurance. All wage rates and employee benefits costs must be filed with the City at time of contract execution.
b. Materials - per purchase unit.
c. Insurance, as stated elsewhere in this contract.
d. Job Foreman - who will also perform duties as a carpenter.
e. Rental of extraordinary equipment required by Contractor and approved by Architect.
f. Sub-contractors.

Tabulation of hours for compensation payable shall be calculated in accordance with the approved records hereinbefore specified. In addition to the amounts above shown, the Contractor shall be allowed the sum of ten per cent (10%) of the total thereof for office overhead and profit. Said percentage shall be retained until the job shall be fully completed. The total amount which the Contractor may receive under the provisions of this contract shall not exceed $36,300. This contract may be amended by mutual consent of both parties should work costing an additional amount be desired by the Owner.

TERMINATION OF AGREEMENT: This agreement shall terminate on completion of the scope of work herein specified. Termination may be caused previous thereto by the City of Clayton.

a. If the Contractor shall fail to prosecute the work vigorously and diligently as would normally be required of a Contractor performing such work.
b. If the Contractor shall fail to provide a workmanlike project.
c. If the cost of the total work shall exceed funds available. In this event, the Contractor shall receive written notice of such termination not less than five (5) calendar days prior to the effective date of termination.

OUTLINE SPECIFICATIONS

FOR

HANLEY HOUSE
7600 WESTMORELAND DRIVE

FEB. 12, 1969

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1. WHEN WEATHER PERMITS, REMOVE EXISTING PLUMBING AND HEATING SYSTEM, INCLUDING OIL TANK IN BASEMENT.

2. REINFORCE FRAME FLOOR CONSTRUCTION OVERHEAD IN BASEMENT.

3. REPLACE EXISTING BRICK PIERS IN BASEMENT INCLUDING CONCRETE SPREAD FOOTING AT DEPTH SUFFICIENT TO PERMIT LOWERING OF FLOOR LEVEL AS DETERMINED AT SITE.

4. EXCAVATE LEVEL OF FLOOR AS DIRECTED IN NORTH AND CENTER SECTION OF BASEMENT.

5. INSTALL UNDERGROUND INTERIOR PLUMBING AS SHOWN ON PLANS.

6. PROVIDE AND INSTALL OVER THE EARTH IN THESE TWO SECTIONS OF BASEMENT A 6 MIL POLYETHELENE VAPOR BARRIER.

7. POUR A 4" THICK CONCRETE SLAB IN THESE TWO SECTIONS OF BASEMENT REINFORCED WITH 6"x6"-#6-#6 WELDED STEEL MESH AND A SMOOTH TROWEL FINISH.

8. ERECT HAYDITE BLOCK WALLS IN BASEMENT AS SHOWN ON PLANS.

9. TUCKPOINT AND REPAIR INTERIOR FACES OF EXISTING STONE FOUNDATION WALLS AS REQUIRED AND/OR DIRECTED.

10. PROVIDE THIMBLE FOR HEATER FLUE IN NORTHWEST CHIMNEY AS DIRECTED BY ARCHITECT.

11. PROVIDE 5/8" PLASTERBOARD CEILING IN MECHANICAL ROOM, LOCKER ROOM AND TOILET, TAPED AND PREPARED FOR PAINTING.

MASONRY - ALL WORK INCLUDED IN THIS CONTRACT TO BE EXPOSED SHALL BE DONE WITH THE OBJECT OF MAKING THE NEW WORK MATCH EXISTING AS NEAR AS POSSIBLE. IF REPLACEMENT MATERIALS ARE REQUIRED THEY SHALL MATCH EXISTING IN SIZE, TEXTURE AND COLOR.

EXISTING PAINT ON BRICKWORK SHALL NOT BE REMOVED DELIBERATELY NOR SHALL ANY EFFORT BE MADE TO DUPLICATE ITS COLOR ON WORK TO BE DONE.

ON EXTERIOR OPENINGS IN WHICH MASONRY HAS DROPPED AT ITS HEAD AND REQUIRES TUCKPOINTING, PROVIDE A STEEL PLATE LINTEL AS DIRECTED BY THE ARCHITECT.

CARPENTRY - REPAIR OR REPLACE PORCH FLOORING AND THEIR FOUNDATIONS AS DIRECTED BY ARCHITECT.

CARPENTRY (CONT'D.)

REPAIR OR REPLACE ALL TRACERY, RAILINGS, CEILINGS, COLUMNS AND CORNICES AS REQUIRED, SAME TO MATCH EXISTING OR BE IN ACCORDANCE WITH DETAILS PROVIDED BY ARCHITECT.

REPAIR OR REPLACE ALL SASH, FRAMES AND WOOD SILLS. IF SASH ARE REPLACED, EVERY EFFORT SHOULD BE MADE TO SALVAGE THE EXISTING ANTIQUE GLASS. IF REPLACEMENT GLASS IS REQUIRED, IT SHALL BE OF TYPE AND MANUFACTURE SPECIFIED BY ARCHITECT.

ROOF: WHEN WEATHER PERMITS AND ROOFLINES HAVE BEEN LEVELED, THE EXISTING ROOF SHALL BE REMOVED. NEW RAFTERS (2"x8") SHALL BE CUT TO SHAPE AND APPLIED IN BETWEEN EXISTING RAFTERS, ONE PER SPACE. OVER EXISTING SPLIT SHEATHING APPLY A LAYER OF 1/2" PLYWOOD AS SHEATHING.

INTERIOR - INTERIOR WALLPAPER SHALL BE REMOVED WITH EXTREME CARE AND UNDER THE DIRECT SUPERVISION OF THE ARCHITECT. IN SO DOING THE OBJECT IS TO ESTABLISH A RECORD OF THE NUMBER OF LAYERS AND THEIR DESIGNS AND IF THE WALLS WERE PAINTED PRIOR TO PAPERING AND, IF SO, WHAT COLORS.

AFTER THIS HAS BEEN RESOLVED AND RECORDED, ALL PLASTER SHALL BE PATCHED OR RENEWED OVER THE EXISTING WOOD LATH.

BEFORE REMOVING PAINT ON EXISTING WOODWORK (INTERIOR AND EXTERIOR) SELECTED AREAS SHALL BE SCRAPED WITH A RAZOR BLADE TO DETERMINE ORIGINAL AND SUBSEQUENT PAINT COLORS.

ROOFING - COVER SHEATHING WITH ONE PLY 15 LB. ASBESTOS FELT-UNPERFORATED OR NO. 33 ASBESTOS UNDERLAYMENT FELT (BOTH MANUFACTURED BY JOHNS-MANVILLE).

SHINGLES SHALL BE BEL-AIR AS MANUFACTURED BY JOHNS-MANVILLE, LAID WITH 7" EXPOSED TO WEATHER AND SECURED WITH FLAT HEAD SCREW THREAD OR RING BARBED GALVANIZED NEEDLE POINT NAILS 1-3/4" LONG.

COLOR OF SHINGLE WILL BE SELECTED BY ARCHITECT.

INSULATION - PROVIDE 4" OF LOOSE INSULATION IN CEILING OF SECOND FLOOR.

PLUMBING - REMOVE ALL EXISTING PLUMBING INCLUDING VENT THROUGH THE ROOF AND 4" SANITARY SEWER SLIGHTLY BURIED ON FLOOR OF BASEMENT.

PROVIDE NEW SYSTEM OF PLUMBING AS SHOWN ON PLANS WITH NEW 6" SANITARY SEWER TO SEWER IN WESTMORELAND.

NEW STACK FOR BASEMENT TOILET FACILITIES SHALL BE ERECTED UP AGAINST FRONT MASONRY WALL AS SHOWN.

PROVIDE AN UNDERGROUND SYSTEM AS SHOWN TO DISCHARGE DOWNSPOUTS INTO PUBLIC SYSTEM.

PLUMBING (CONT'D.)

FIXTURES: WATER CLOSET - TO BE SELECTED

LAVATORY - TO BE SELECTED

SINK - TO BE SELECTED

HOT WATER HEATER

ELECTRICAL - REMOVE ALL EXISTING ELECTRICAL WORK AND INSTALL NEW SYSTEM IN ACCORDANCE WITH LAYOUT PREPARED BY ARCHITECT.

SERVICE SHALL BE UNDERGROUND TO 200 AMP. PANEL LOCATED IN HEATER ROOM.

ALL BASE ELECTRICAL RECEPTACLES SHALL BE LOCATED IN THE BASEBOARD OR IN THE FLOOR, AS DIRECTED ON THE JOB BY THE ARCHITECT.

HEATING AND VENTILATING - PROVIDE NEW HEATING AND AIR CONDITIONING IN ACCORDANCE WITH PLANS PREPARED BY BELT & GIVEN, CONSULTING ENGINEERS.

SEPTEMBER 6, 1968

MR. ROY W. JORDAN,
237 LINDEN AVE.,
ST. LOUIS, MO. 63105

RE: HANLEY HOUSE
CLAYTON, MO.

DEAR MR. JORDAN:

AFTER A FAIRLY COMPREHENSIVE SURVEY OF THE ABOVE REFERENCED PROPERTY WITH EUGENE J. PETERSEN, DIRECTOR OF PUBLIC WORKS FOR THE CITY OF CLAYTON ON SEPTEMBER 5, 1968, WE SUBMIT THE FOLLOWING ESTIMATE OF THE COST OF PUTTING THE MAIN BUILDING AND SUMMER KITCHEN INTO SOUND STRUCTURAL CONDITION.

TERMITE PROOFING	$500.00
REMOVE WALLPAPER	500.00
REROOF	3,000.00
TUCKPOINT EXTERIOR	3,000.00
HEATING AND COOLING	6,000.00
ELECTRICAL	2,000.00
CARPENTRY - REBUILD PORCHES, REPAIR ALL WOODWORK, SASH, SHUTTERS, ETC.	15,000.00
FLOOR REFINISH	750.00
INSULATION	400.00
SHEET METAL, DOWNSPOUTS, GUTTERS	2,000.00
PAINTING EXTERIOR	2,000.00
HARDWARE - REFINISH AND REPLACE	1,000.00
PLASTERING	2,000.00
	$38,150.00
CONTINGENCIES	3,850.00
	$42,000.00
ARCHITECT'S FEES @ 10%	4,200.00
ESTIMATED TOTAL	$46,200.00

THESE COSTS ARE ONLY ESTIMATES AND MAY VARY UP OR DOWN BUT THE ESTIMATE OF THE TOTAL SHOULD BE FAIRLY RELIABLE. THESE COSTS DO NOT INCLUDE INTERIOR DECORATION (BUT DO INCLUDE PREPARATION OF INTERIOR SURFACES FOR PAINT OR PAPER) NOR THE COST OF RECONSTRUCTION OF THE FENCING, PRIVY, CARRIAGE HOUSE, WELL HOUSE, OR ANY OTHER OUT-BUILDINGS.

OUR FINDINGS INDICATE THAT THE MIDDLE STONE FOUNDATION HAS SETTLED SOMEWHAT AND OBVIOUSLY IS CAUSING THE CRACKS IN THE

PLASTER OVER THE STAIRS TO THE SECOND FLOOR. MR. PETERSEN HAS OFFERED TO UNDERPIN THIS FOUNDATION WITH CITY FORCES. IT IS A PROJECT THAT HE CAN READILY UNDERTAKE DURING THE WINTER MONTHS, WHICH CAN FIT INTO OUR SCHEDULE BECAUSE WE ARE NOT LIKELY TO REPAIR THE PLASTER WALLS BEFORE NEXT YEAR.

IT IS RECOMMENDED, THEREFORE, THAT WE BE AUTHORIZED TO PROCEED WITH REPAIRING AND TUCKPOINTING BRICK WALLS AND FOUNDATION PIERS, REPAIRING OR REBUILDING FRONT AND REAR PORCHES, WHICH WILL LEVEL UP THE ROOF AND PERMIT US TO REROOF THE MAIN BUILDING.

WHEREAS THE ROOF ORIGINALLY WAS COVERED WITH A SAWED SHINGLE, MR. PETERSEN IS CONCERNED ABOUT THE REUSE OF THIS MATERIAL. ALTHOUGH THE CODE DOES NOT PERMIT USE OF THIS MATERIAL, MR. PETERSEN FELT CONFIDENT THAT SPECIAL PERMISSION COULD BE OBTAINED, BUT PREFERRED NOT TO MAKE A SPECIAL CASE FOR A PUBLIC PROJECT.

AS AN ALTERNATE, I WOULD RECOMMEND THE USE OF JOHNS-MANVILLE ASBESTOS SHINGLES "BEL-AIR" WHICH RESEMBLE WOOD SHINGLES. I AM SENDING MR. VAN RAVENSWAAY A SAMPLE (UNDER SEPARATE COVER) AND A BROCHURE ON THIS MATERIAL FOR HIS CONSIDERATION. THIS MATERIAL IS COMPLETELY FIREPROOF AND ALTHOUGH THE COST WOULD BE MORE INITIALLY, IT WOULD HAVE A LIFE OF ABOUT 30 YEARS, COMPARED TO ABOUT 10 FOR THE WOOD SHINGLES.

THE SHUTTERS WILL BE MARKED AND REMOVED BEFORE STARTING ON THE BRICKWORK AND, AT SOME APPROPRIATE TIME IN THE BUILDING SCHEDULE, WILL BE DIPPED TO REMOVE EXISTING PAINT, BE REPAIRED AND REPLACED WHERE NECESSARY. IT MAY BE NECESSARY TO ONLY REPLACE THE SOUTH SIDE ATTIC WINDOW SHUTTERS WHICH ARE MISSING.

IT WILL BE POSSIBLE TO ADVERTISE FOR BIDS ON A FEW ITEMS, SUCH AS HEATING AND COOLING, ELECTRICAL, SHEET METAL, ROOFING, ETC., BUT THERE ARE SEVERAL ITEMS - SUCH AS TUCKPOINTING, CARPENTRY, ETC. - WHICH WILL HAVE TO BE DONE ON A COST PLUS BASIS BECAUSE THE EXTENT OF THE WORK IS SO INDEFINITE. I WOULD LIKE TO SUBMIT THAT JOSEPH SCHIERMEIER BE RETAINED AS GENERAL CONTRACTOR, WHO WOULD PROVIDE THE CARPENTERS AND COORDINATE THE EFFORTS OF ALL OTHER TRADES. MR. SCHIERMEIER HAS PROVIDED THIS WORK ON MANY OF THE OTHER LANDMARKS IN THE ST. LOUIS AREA, WORKING UNDER ME ON SUCH PROJECTS AS THE CHATILLON-DEMENIL HOUSE AND OLD ST. FERDINAND'S SHRINE IN FLORISSANT. HE IS VERY SYMPATHETIC AND RELIABLE IN THIS TYPE OF WORK AND VERY TRUSTWORTHY CONCERNING MONEY MATTERS. HE HAS BEEN WORKING FOR THE ACTUAL COST OF TIME AND MATERIALS AND/OR THE COSTS OF SUB-CONTRACTS, PLUS 10% FOR OVERHEAD AND PROFIT.

I WILL BE PLEASED TO MEET WITH YOU AT YOUR CONVENIENCE TO DISCUSS THIS REPORT FURTHER.

SINCERELY,

GERHARDT KRAMER

GK'ML

c.c. CHARLES VAN RAVENSWAAY
EUGENE PETERSEN

NOVEMBER 30, 1970

MR. JOSEPH SCHIERMEIER
509 WASHINGTON
FLORISSANT, MISSOURI 63031

RE: HARLEY HOUSE

DEAR JOE:

WE ARE PREPARED TO AWARD A CONTRACT FOR INTERIOR PAINTING, BUT BEFORE DOING SO, THE FOLLOWING ITEMS ON THIS PROJECT STILL REQUIRE YOUR ATTENTION:

1. INSTALL PICTURE MOULDING IN NORTHWEST AND NORTHEAST ROOM, FIRST FLOOR. ITS EXACT SIZE AND LOCATION IS SO NOTED ON THE WALLS IN THESE ROOMS. SINCE THIS MOULDING PROBABLY WILL HAVE TO BE RUN SPECIAL, I SUGGEST YOU HAVE THE MILL SEND ME A FULL SIZE DETAIL OR APPROVAL BEFORE FABRICATION.

2. A SLIVER OF WOOD HAS BEEN TORN FROM A MOULDING OF THE MANTEL IN THE NORTHEAST ROOM. THE SLIVER HAS BEEN SAVED. PLEASE GLUE THIS BACK IN PLACE.

3. REMOVE THE QUARTER ROUND FROM THE BASE IN THE NORTHWEST, NORTHEAST AND SOUTHEAST ROOMS, FIRST FLOOR. THESE ROOMS WILL BE CARPETED AND WE WANT THE PAINTER TO PAINT THESE SEPARATELY. YOU CAN REPLACE THEM AFTER THE CARPET HAS BEEN LAID AND THE QUARTER ROUND PAINTED.

4. THE BRICKLAYER SHOULD CLOSE UP THE STOVE FLUES IN ALL ROOMS, EXCEPT THOSE IN THE NORTHEAST AND NORTHWEST ROOMS, SECOND FLOOR. THESE ARE THE ONLY TWO THAT HAVE SHEET METAL SLEEVES.

5. THE STOVE FLUE IN THE OUTDOOR KITCHEN SHOULD BE LEFT OPEN, BUT ALL THE BIRD NESTINGS SHOULD BE CLEANED FROM THE FLUE. AN IRON STOVE WILL BE VENTED INTO THIS FLUE.

6. ALL DOUBLE HUNG SASH SHOULD BE SCREWED IN THE CLOSED POSITION. PERHAPS A SMALL STRIP OF FELT INSULATION CAN BE INSERTED BETWEEN THE MIDDLE RAILS AND THEN THE TWO SASH SCREWED TOGETHER AT THE RAILS. NO MORE THAN TWO SCREWS WILL BE REQUIRED.

7. REMOVE CURTAIN ROD HARDWARE STILL REMAINING AT THE HEAD OF A FEW WINDOWS ON THE FIRST FLOOR.

8. BRICKLAYER SHALL INSTALL IRONFRONT FRAME AND SCREEN IN FIREPLACE

in Northwest room, second floor and Southeast room, first floor. The latter has not been delivered yet. Hopefully it will be a frame with basket to replace the present modern unit. The back face of both these fireplaces will have to be bricked-in to match the others. The outside face of the fireplace in the Southeast room, first floor, shall be plastered. If plaster will not stick to the existing hard-pressed brick, these brick shall also be changed.

9. The bricklayer shall remove the recent white tuckpointing done on the face of the fireplace in the outdoor kitchen and this area partially tuckpointed to match the inside of the fireplace. This area will not be plastered.

10. Improve tuckpointing on rear porch where handrail is installed into brickwork.

11. Remove a section (about 8-10") of new baseboard in Stair Hall, first floor, and replace with section of original, same to be exhibit of original moulding and painting.

12. The refinishing and/or replacement of all hardware will be done by the interior decorators. If you have any taken from the project, please return same.

13. On the exterior, remove all screen and storm sash hardware and abbeting. Every window and door on the rear second floor porch has some evidence of these. The doors have carpet strips on the exterior. There are a few screw eyes for screens on the front windows. After this has been done, painting will be required. Pauling promised to leave some paint on the job to do this.

14. Remove a screen stop (?) from the interior of the window in the Southwest room, first floor.

15. Finish access to attic, Northwest room, second floor.

16. Finish privy interior. We should meet and discuss this first. I am having a few more pieces of old 1 x 12 delivered to complete the interior partition.

For your information, I understand that Bender and Sons, a lumber supply house on Highway 40 a few miles west of the Missouri River, still has a fine stock of old fashioned mouldings, etc.

Please take care of these items as soon as possible.

Very truly yours,

Kramer & Harms, Inc.

Gerhardt Kramer, FAIA

GK:rg

cc: Mr. Clifford R. James

October 1, 1963

Dear Gerhardt:

Many thanks for your letter of September 24th.

I'll comment on the items as listed in your letter:

1. Remove wallpaper.

I'm hoping that the twentieth-century furnishings can be removed from the house in the near future and that the older items can be put in storage so the interior work can get started. The ideal kind of storage would be one in which we'd have enough accessibility to give the furniture a thorough checking later and arrange for the restoration of the pieces which will be used on display.

Then the removal of the wallpaper can get under way. As you know, removing old wallpaper is a very delicate and difficult job and I'd rather have you leave representative sections on the wall until I can see them than to attempt to have them removed.

2. Tuckpointing.

Don't you feel that it would be better to have the new mortar of the same texture as the original mortar rather than making new mortar to match the original color plus the remnants of the yellow paint? Obviously as time passes the yellow paint is going to flake off and accentuate the yellow colored patches.

3. Heating and cooling.

Yesterday I had lunch with the engineer who spent eight years of his life designing the incredibly complicated air-conditioning system throughout our museum. His inventiveness was amazing and he was faced with all kinds of unusual problems. I hope we can apply the same inventiveness to our problem with the Hanley House. Consequently I'd like to urge that we not get our minds set that we have to follow the procedure you listed until we exhaust every other possibility. I'm sure you'll agree it would be much better for servicing, maintenance, and everything else to have all the machinery located in the basement. As you

know, the woods are full of routine and unimaginative heating and cooling engineers and what we need to find is someone with the kind of imagination and the kind of enthusiasm that our particular job calls for.

6 &
9. Painting exterior.

It was my thought that if it is possible and practical, I'd rather for the shutters to be put in good physical condition and repainted over the present paint. If all conditions are equal, this gives a softer texture than completely cleaning off the shutters and painting.

7. Interior decoration.

If your check indicates that the woodwork presently painted white was originally grained, I'm sure the painters would recommend removing all the paint and the original graining so a reproduction coat of graining can be put on.

Ideally it would be fine if we could just lift off the white paint and leave the original graining, but it would be awfully hard to find someone competent to do that and it would be so expensive that I don't think it would be justified.

10. Hardware.

Since a good many of the original locks are in place, we can identify the types of the missing ones and I hope we can get antique locks of the proper type as needed.

Many thanks again for your helpful letter. Please send along other questions as they come up and keep me informed about how things progress.

With my best.

Sincerely,

Charles van Ravenswaay
Director

Mr. Gerhardt Kramer
Kramer & Harms, Architects
9640 Clayton Road
St. Louis, Missouri 63124

CC: Mr. Roy W. Jordan
Mr. Clifford R. James

K R A M E R & H A R M S

ARCHITECTS

9640 CLAYTON ROAD • ST. LOUIS, MISSOURI 63124 • TELEPHONE WYDOWN 3-6656

GERHARDT KRAMER, AIA JOE G. HARMS, AIA

SEPTEMBER 24, 1968

RE: THE HANLEY HOUSE
CLAYTON, MO.

DEAR CHARLES:

THANK YOU FOR YOUR LETTER OF SEPTEMBER 12, 1968, COMMENTING ON MY LETTER OF SEPTEMBER 6, 1968, TO ROY W. JORDAN, CONTAINING AN ESTIMATED BUDGET FOR PUTTING THE ABOVE REFERENCED PROJECT IN GOOD REPAIR AND A SUGGESTED PROCEDURE FOR DOING THIS.

IN REPLY I MAKE THE FOLLOWING COMMENTS:

1. REMOVE WALLPAPER

Remove all furnishings. Leave on walls

I WILL PERSONALLY INSTRUCT THE PERSON REMOVING THE WALL PAPER AND SUPERVISE THE JOB CLOSELY. IF AN EARLIER PAPER COMES TO LIGHT, IT WILL EITHER BE REMOVED (IF POSSIBLE) AND SAVED (PROPERLY IDENTIFIED) OR, A REPRESENTATIVE SECTION LEFT ON THE WALL FOR YOUR VIEWING.

2. TUCKPOINTING

do not color mortar to match paint

ONLY AREAS AND/OR INDIVIDUAL JOINTS WHICH NEED TUCKPOINTING WILL BE SO TREATED. COLOR CAN, AND WILL, BE ADDED TO THE MORTAR IN AN ATTEMPT TO MATCH THE EXISTING, WHICH HAS BEEN PAINTED YELLOW. REMAINING AREAS WILL BE LEFT AS IS. I MIGHT RECOMMEND A LIGHT SCRAPING WITH WIRE BRUSH TO REMOVE THE FLAKING. THIS MAY ALSO REDUCE THE OBVIOUSNESS OF THE TUCKPOINTED AREAS FROM THE OTHER BECAUSE, NO MATTER HOW PERFECT THE WORKMANSHIP, THE PATCHES WILL SHOW.

3. HEATING AND COOLING

THIS PROBLEM WILL BE DONE IN CLOSE COORDINATION WITH OUR HEATING ENGINEER AND MR. PETERSEN. SINCE THERE APPEARS TO BE NO SPACE TO GET A DUCT UP TO THE SECOND FLOOR FROM THE BASEMENT, WE MAY SERVICE THE FIRST FLOOR FROM A UNIT IN THE BASEMENT AND THE SECOND FLOOR FROM A UNIT IN THE ATTIC. THIS WORK WILL PROBABLY NOT BE SCHEDULED UNTIL NEXT YEAR.

4. CARPENTRY

NEITHER THE FRONT OR REAR PORCHES HAVE BEEN INSPECTED IN SUFFICIENT DETAIL TO TELL WHETHER THEY NEED JUST A RENAILING OR MUST BE REBUILT ENTIRELY. PERHAPS EXTRA SUPPORTS ARE NECESSARY OR PERHAPS IT IS JUST A MATTER OF PROVIDING BETTER FOOTINGS UNDER THE PRESENT STONE PIERS. THE LOWER DECK OF THE REAR PORCH IS OF COMPARATIVELY RECENT CONSTRUCTION AND SEEMS TO BE IN THE WORST CONDITION AT THIS TIME -

AND WILL TAKE THE WORST PUNISHMENT FROM VISITORS. IF THIS DECK HAS TO BE REBUILT, NO REALLY OLD MATERIAL WILL BE LOST.

ALL MATERIAL USED ON THE PORCHES, AS WELL AS THAT EXISTING CONSTRUCTION TO REMAIN, WILL BE TREATED WITH A PRESERVATIVE SUCH AS WOOD LIFE. THIS PROTECTS THE WOOD FROM DETERIORATION AND TERMITES.

I HAVE NOT HAD AN OCCASION TO LOOK FOR EARLY PAINT COLORS ON THE FRONT PORCH COLUMNS.

5. FLOOR FINISH

WE CAN DISCUSS THIS ITEM ON ONE OF YOUR FUTURE VISITS BECAUSE IT WILL NOT BE UNDERTAKEN THIS YEAR.

6 & 9. PAINTING EXTERIOR

IT WAS MY INTENTION TO PAINT ONLY THE EXTERIOR WOODWORK. WE CAN LOOK AT THE SHUTTERS ON YOUR NEXT VISIT. MANY ARE HELD TOGETHER AT THE CORNERS (ESPECIALLY THE BOTTOM RAIL) WITH METAL ANGLES. THESE SHOULD BE REMOVED BUT THEN SOME OTHER FORM OF REINFORCING WILL BE NECESSARY. IT MAY BE POSSIBLE TO DO THIS WITH WOOD PEGS. I COULD NOT TELL FROM YOUR LETTER WHETHER YOU PREFERRED NOT REPAINTING THE SHUTTERS AT ALL, OR IF YOU WANTED THEM REPAINTED OVER THE EXISTING.

7. INTERIOR DECORATION

AT SOME TIME IN THE PROJECT I WILL HAVE TO LOOK FOR EARLIER PAINT UNDER THE PRESENT WHITE. I WOULD ASSUME THAT ALL INTERIOR WOODWORK ORIGINALLY WAS GRAINED. IF SO, WE WILL HAVE TO CHECK IF THE PRESENT WHITE PAINT MUST BE REMOVED COMPLETELY FOR THE GRAINING, OR IF IT CAN BE APPLIED OVER IT.

8. ROOF

THE PROBLEM OF WEIGHT, IF THE BEL-AIR SHINGLES ARE USED, MUST BE CHECKED. I WILL HAVE SOME CALCULATIONS RUN OFF, BASED ON THE SIZE AND SPACING OF THE ROOF RAFTERS.

10. HARDWARE

WITHOUT CHECKING EACH INDIVIDUAL PIECE OF HARDWARE ON THE PROJECT, ESPECIALLY THE RIM LOCKS, I ASSUMED THAT SOME WILL REQUIRE REPAIR WORK AND SOME, SUCH AS THE EXTERIOR DOORS, MAY REQUIRE REPLACING A LATER LOCK.

Mortised locks.

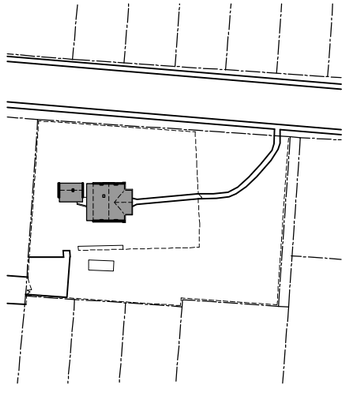
I AM AWAITING INSTRUCTIONS FROM MR. JORDAN BEFORE BEGINNING ANY ACTUAL WORK.

SINCERELY,

GERHARDT KRAMER

MR. CHARLES VAN RAVENSWAAY
WINTERTHUR MUSEUM
WINTERTHUR, DELAWARE 19735

GK'ML
c.c. ROY W. JORDAN



aerial image

SCALE : 1" = 150'-0"

NORTH

site plan diagram

SCALE : 1" = 150'-0"

NORTH

Martin Franklin Hanley House

7600 Westmoreland Avenue
Clayton, Missouri 63105

Existing Conditions Assessment

LG Project No. 07268.001 thru .002

Lawrence Group Architects
314 N. 4th Street, Suite 1000
St. Louis, Missouri 63102

list of drawings

LAWRENCE GROUP

319 N. 4th Street, Suite 1000
St. Louis, MO 63102
314.231.5700. phone
314.231.0876. fax

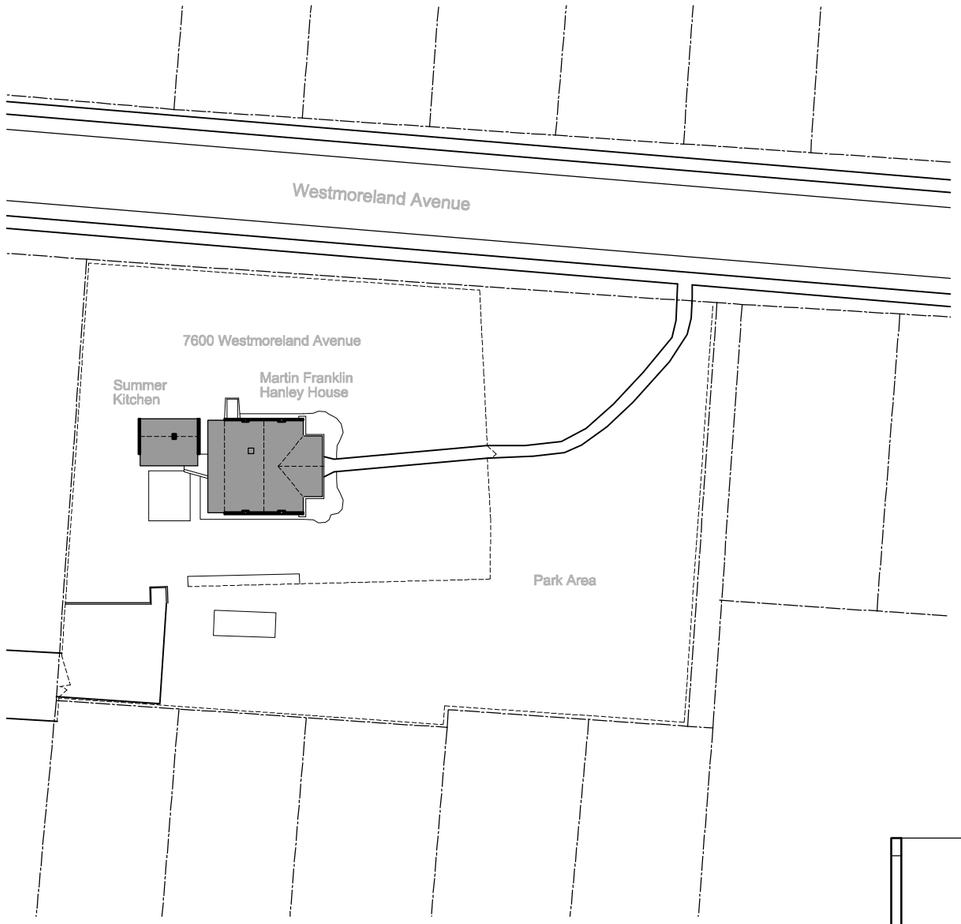
www.thelawrencegroup.com

Existing Conditions Assessment
16 July 07

Cover Sheet

Martin Franklin Hanley House
7600 Westmoreland Avenue
Clayton, Missouri 63105

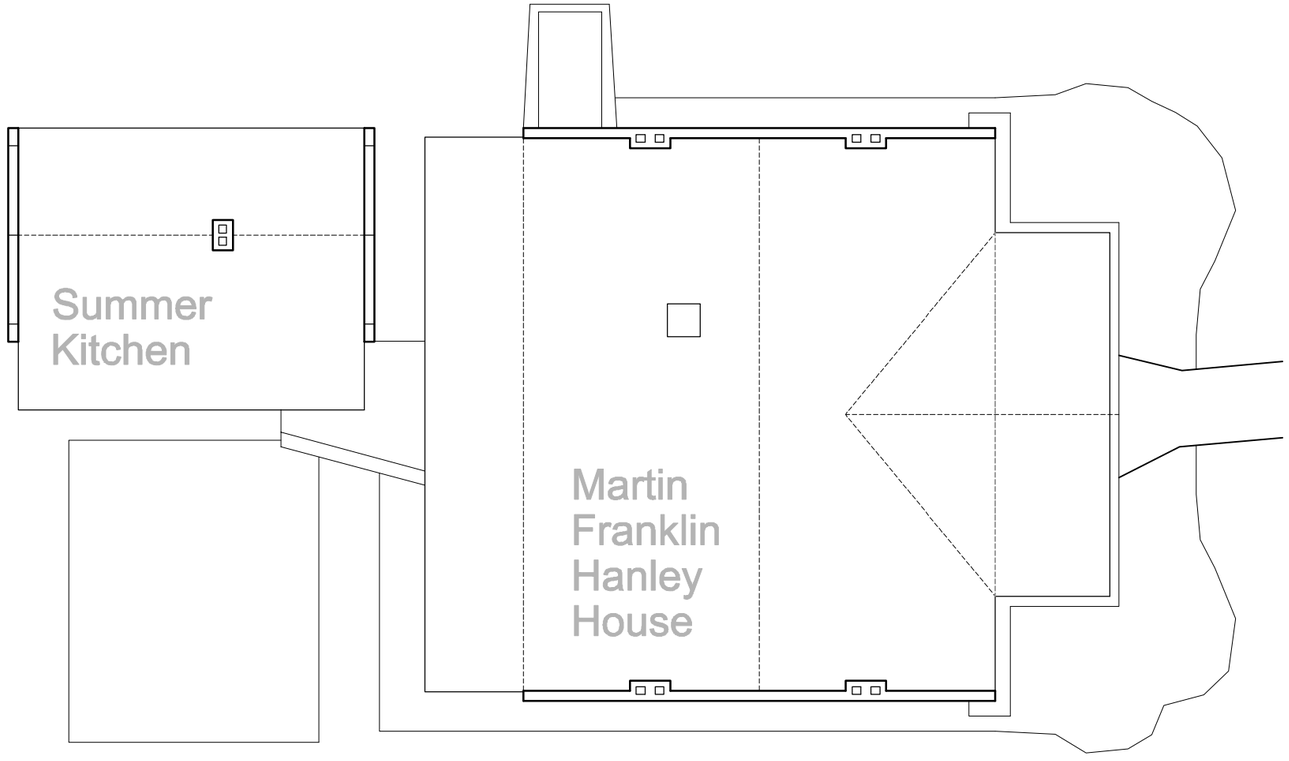
LG Project No. 07268.002



context plan

SCALE : 1" = 60'-0"

NORTH



site plan

SCALE : 1" = 30'-0"

NORTH

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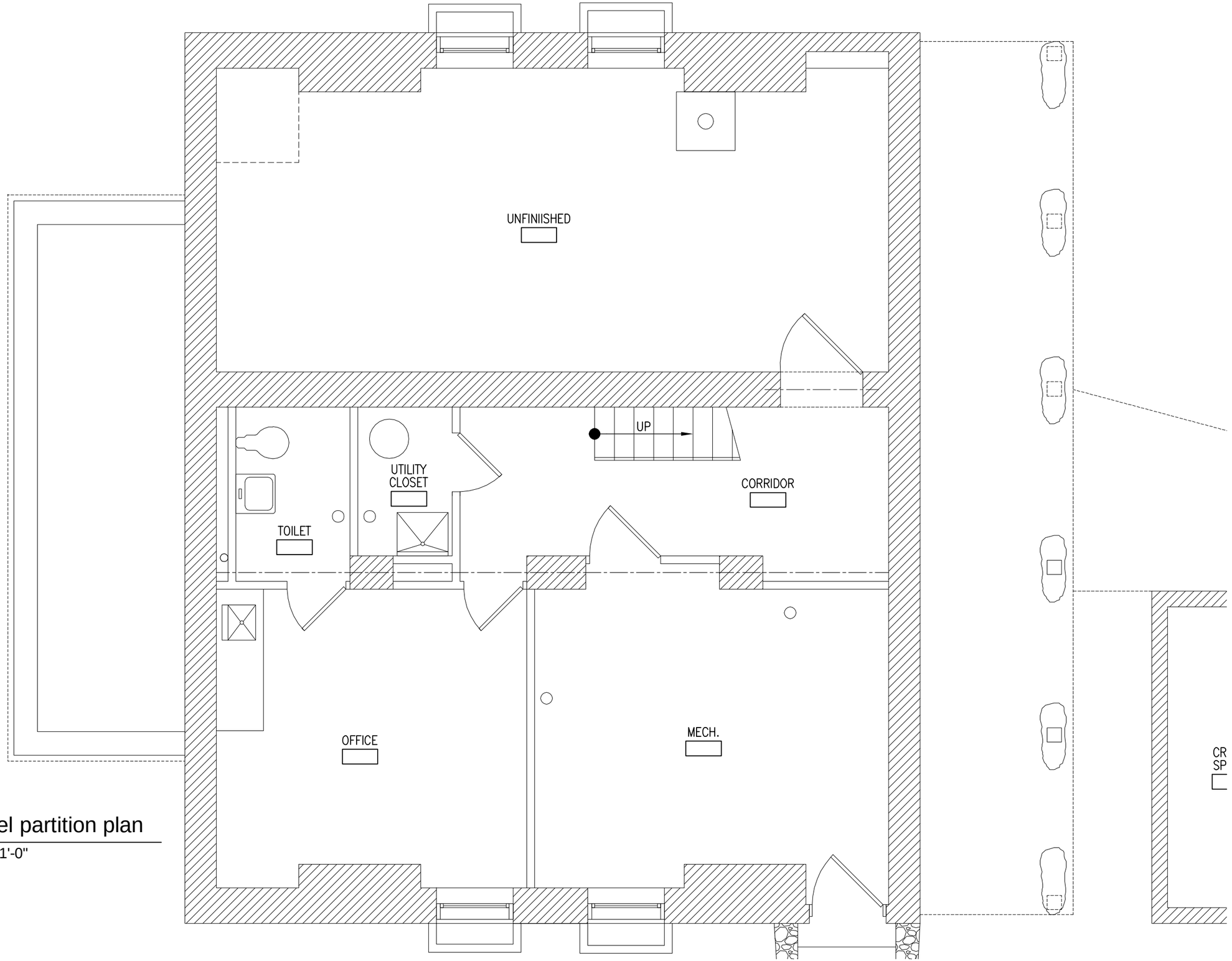
Existing Conditions Assessment

16 July 07

Sheet 01 of 12

Martin Franklin Hanley House
7600 Westmoreland Avenue
Clayton, Missouri 63105

LG Project No. 07268.002



ground level partition plan

SCALE : 1/4" = 1'-0"

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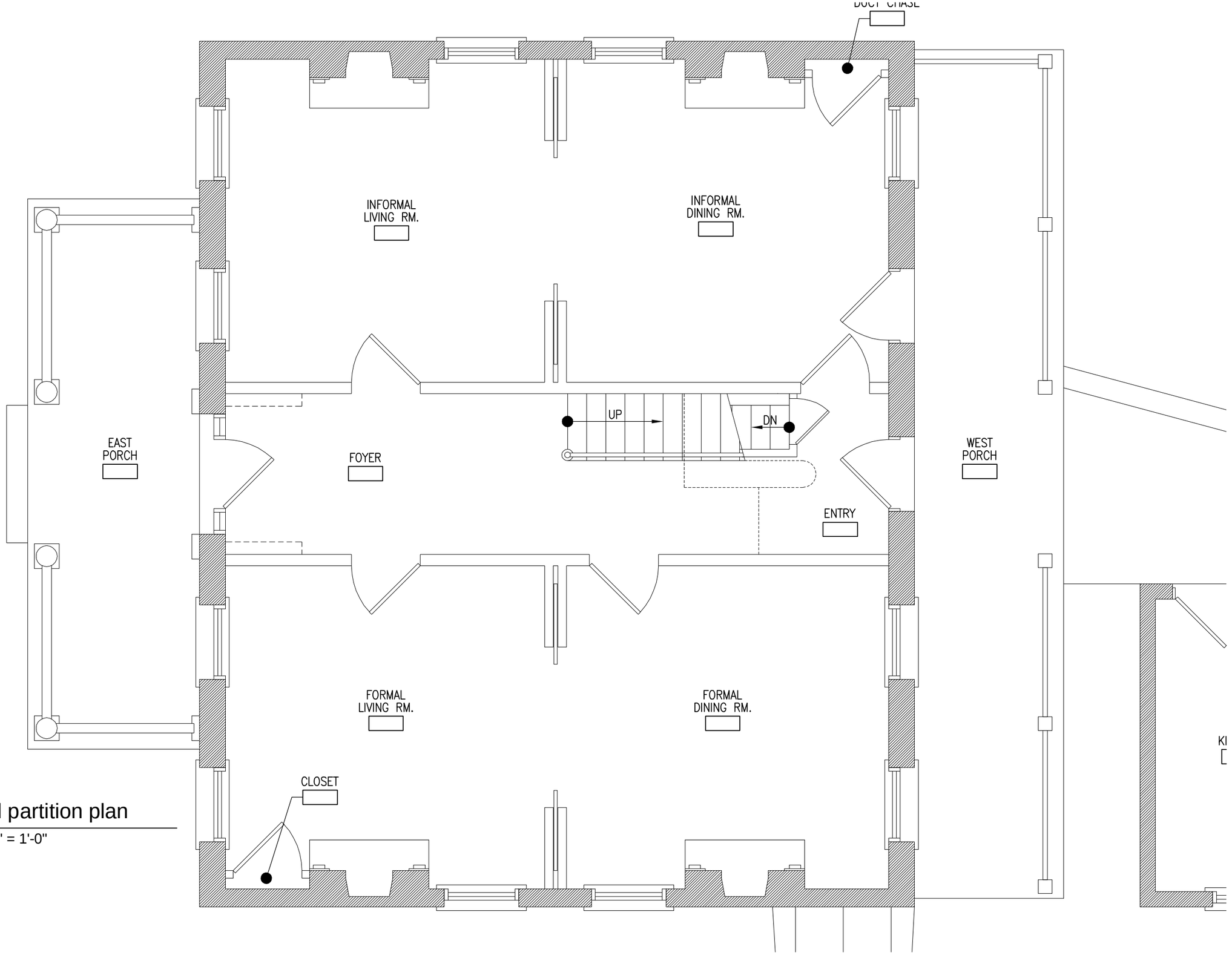

first level partition plan

SCALE : 1/4" = 1'-0"

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Martin Franklin Hanley House
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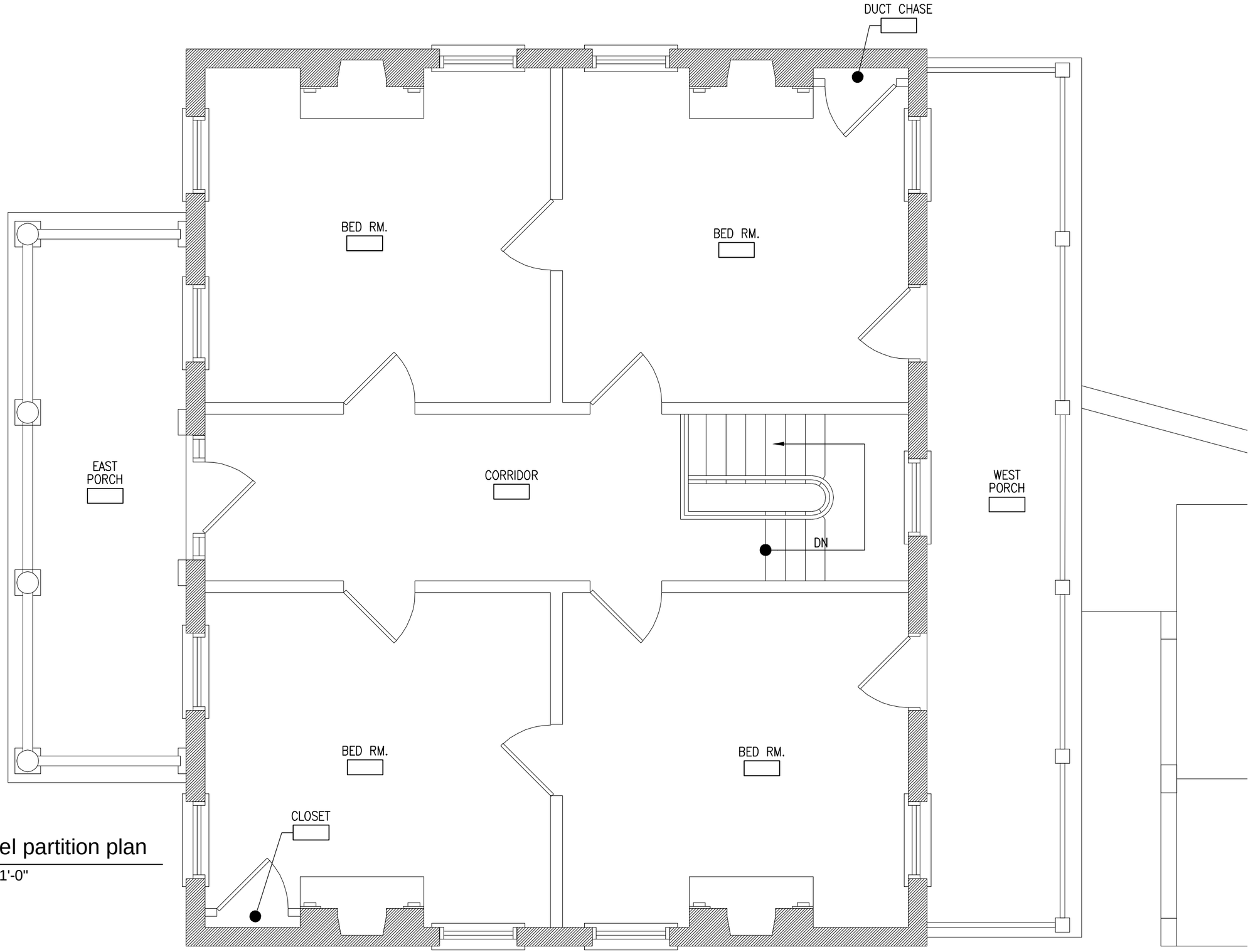

second level partition plan

SCALE : 1/4" = 1'-0"

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Martin Franklin Hanley House
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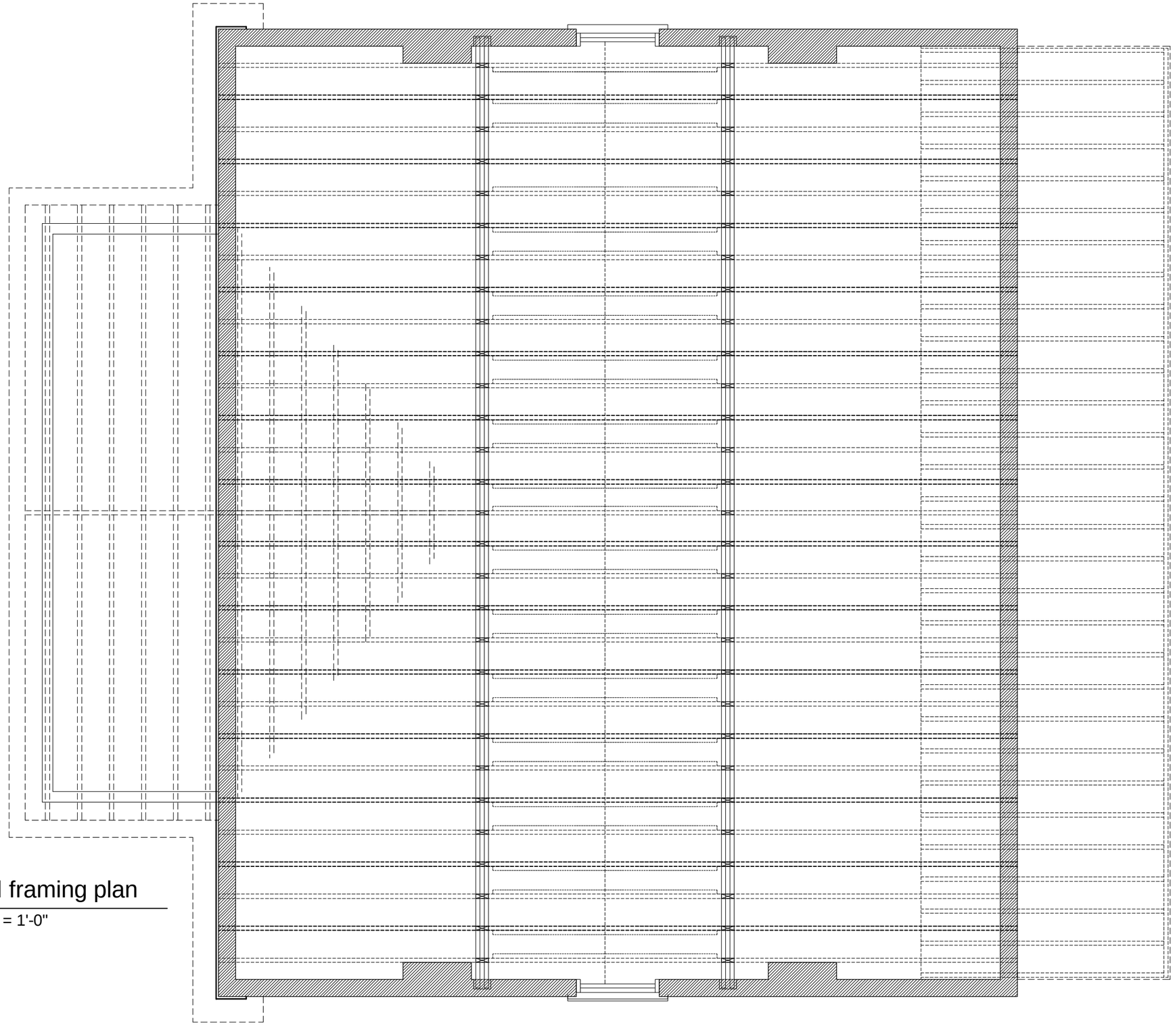

attic level framing plan

SCALE : 1/4" = 1'-0"

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Martin Franklin Hanley House
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LG Project No. 07268.002

east elevation

SCALE : 1/4" = 1'-0"

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Martin Franklin Hanley House
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LG Project No. 07268.002

north elevation

SCALE : 1/4" = 1'-0"

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Martin Franklin Hanley House
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LG Project No. 07268.002

south elevation

SCALE : 1/4" = 1'-0"

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LG Project No. 07268.002

west elevation

SCALE : 1/4" = 1'-0"

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Clayton, Missouri 63105

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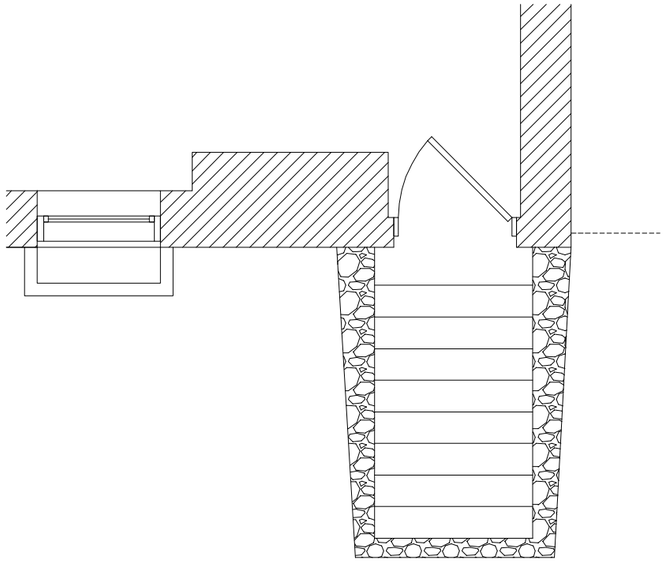
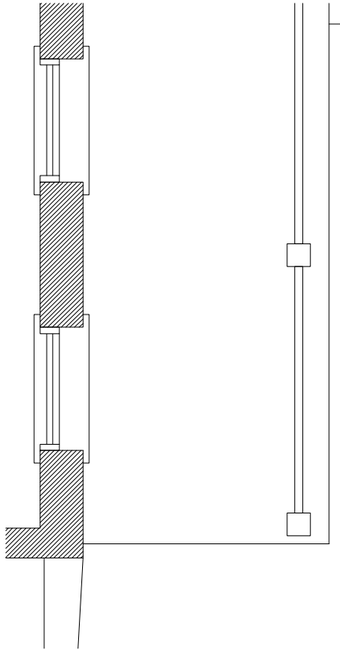
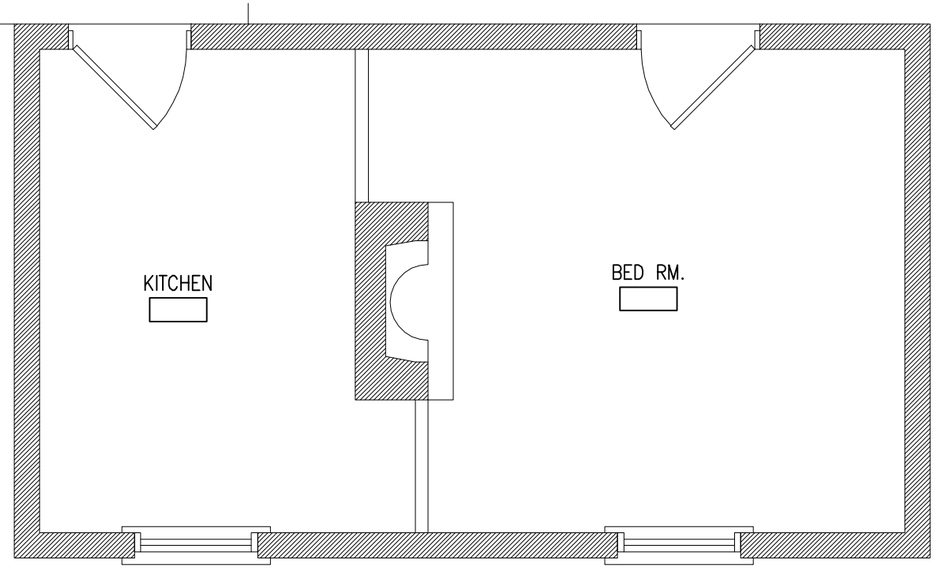


ground level stair detail plan

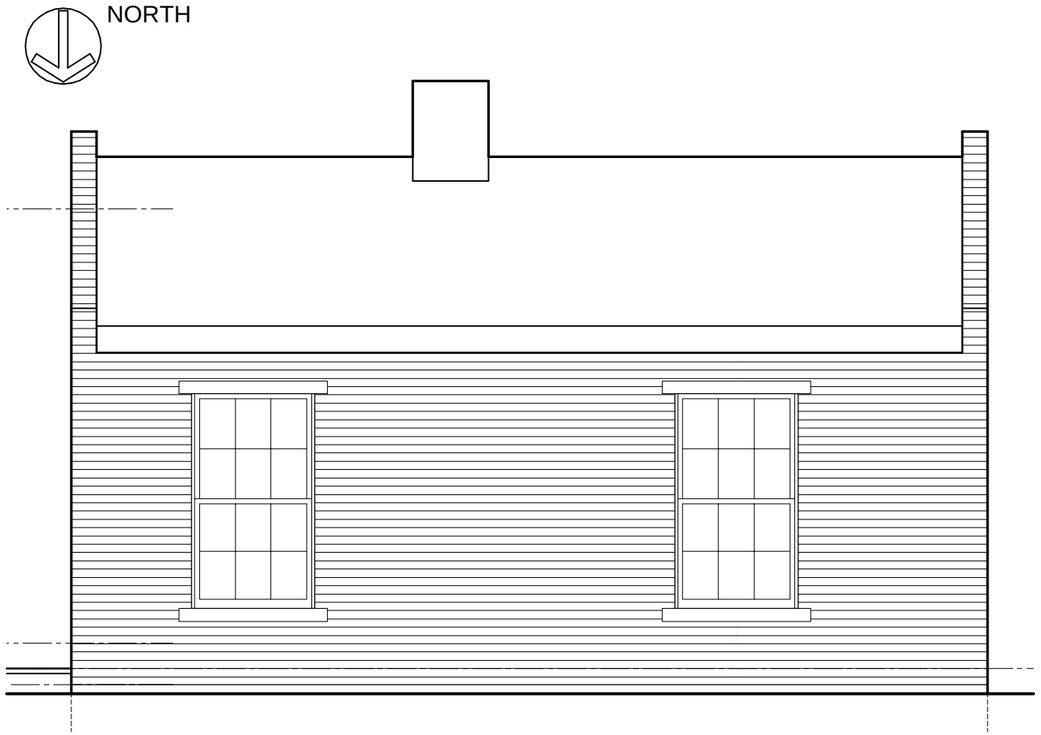
SCALE : 1/4" = 1'-0"





partition plan - summer kitchen

SCALE : 1/4" = 1'-0"



general and keyed notes

NO SCALE

north elevation - summer kitchen

SCALE : 1/4" = 1'-0"

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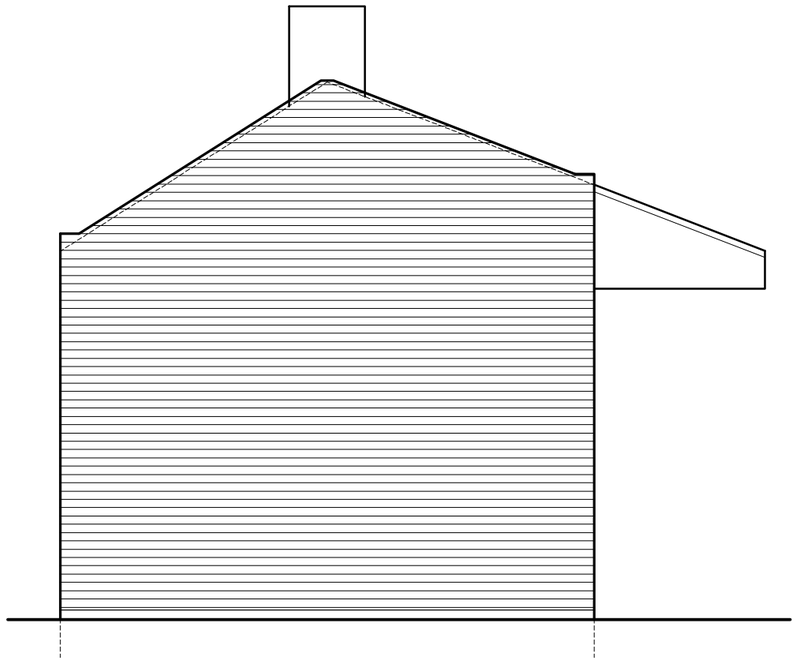
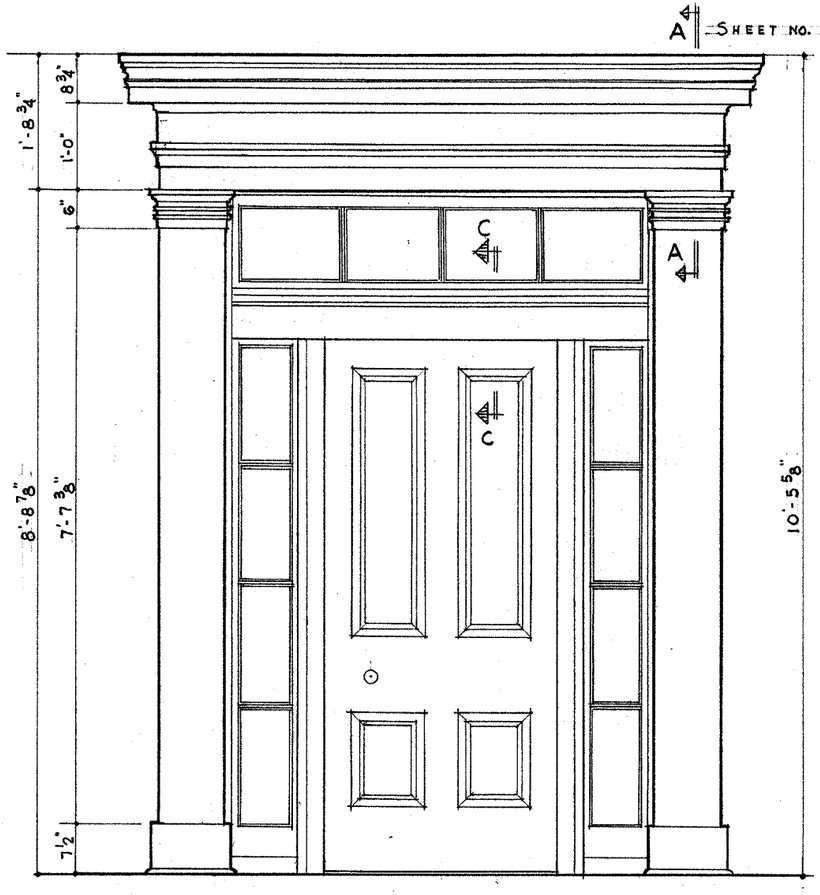


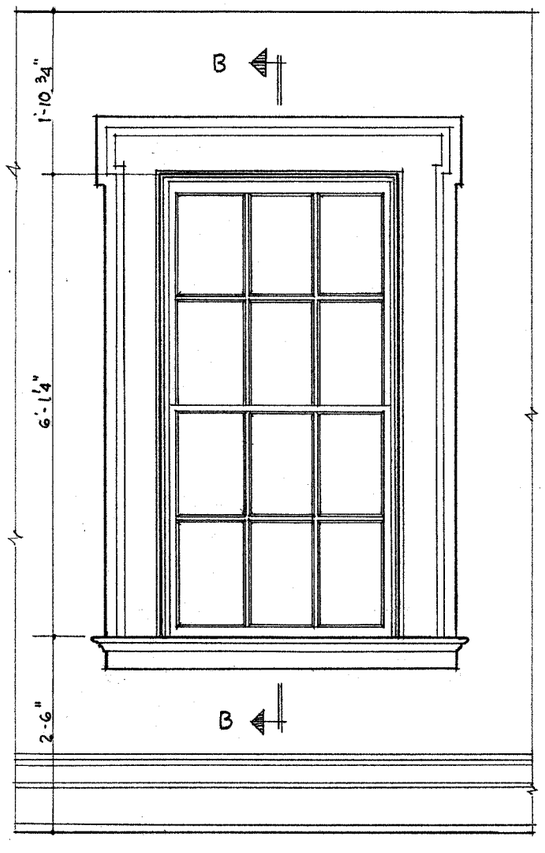
west elevation - summer kitchen
SCALE : 1/4" = 1'-0"

south elevation - summer ktchen
SCALE : 1/4" = 1'-0"



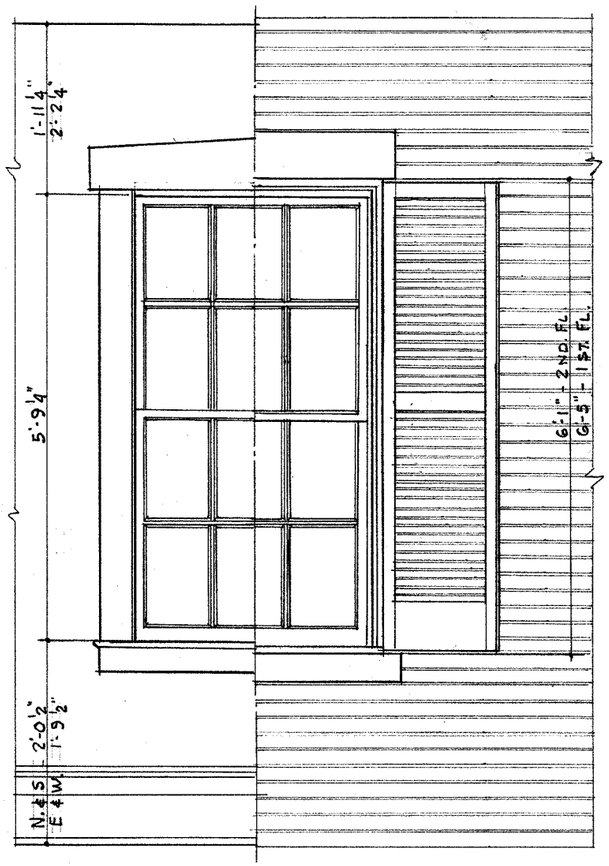
typical exterior entry elevation

SCALE : 1/2" = 1'-0"



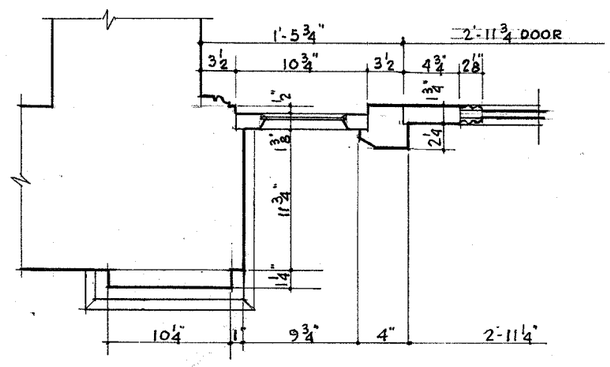
typical int. wind. elevation - first / second

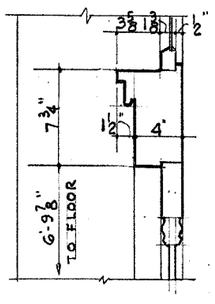
SCALE : 1/2" = 1'-0"



typ. ext. wind. elev. - first / second

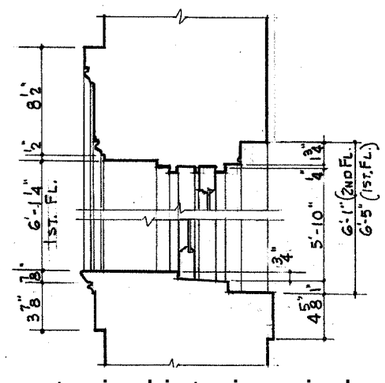
SCALE : 1/2" = 1'-0"

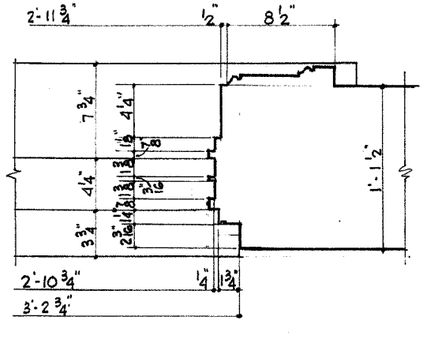




typical exterior entry - typ. jamb, sidelite, and head (sect. C)

SCALE : 1" = 1'-0"





typical interior window - typ. head / sill (sect. B) and jamb

SCALE : 1" = 1'-0"

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Martin Franklin Hanley House
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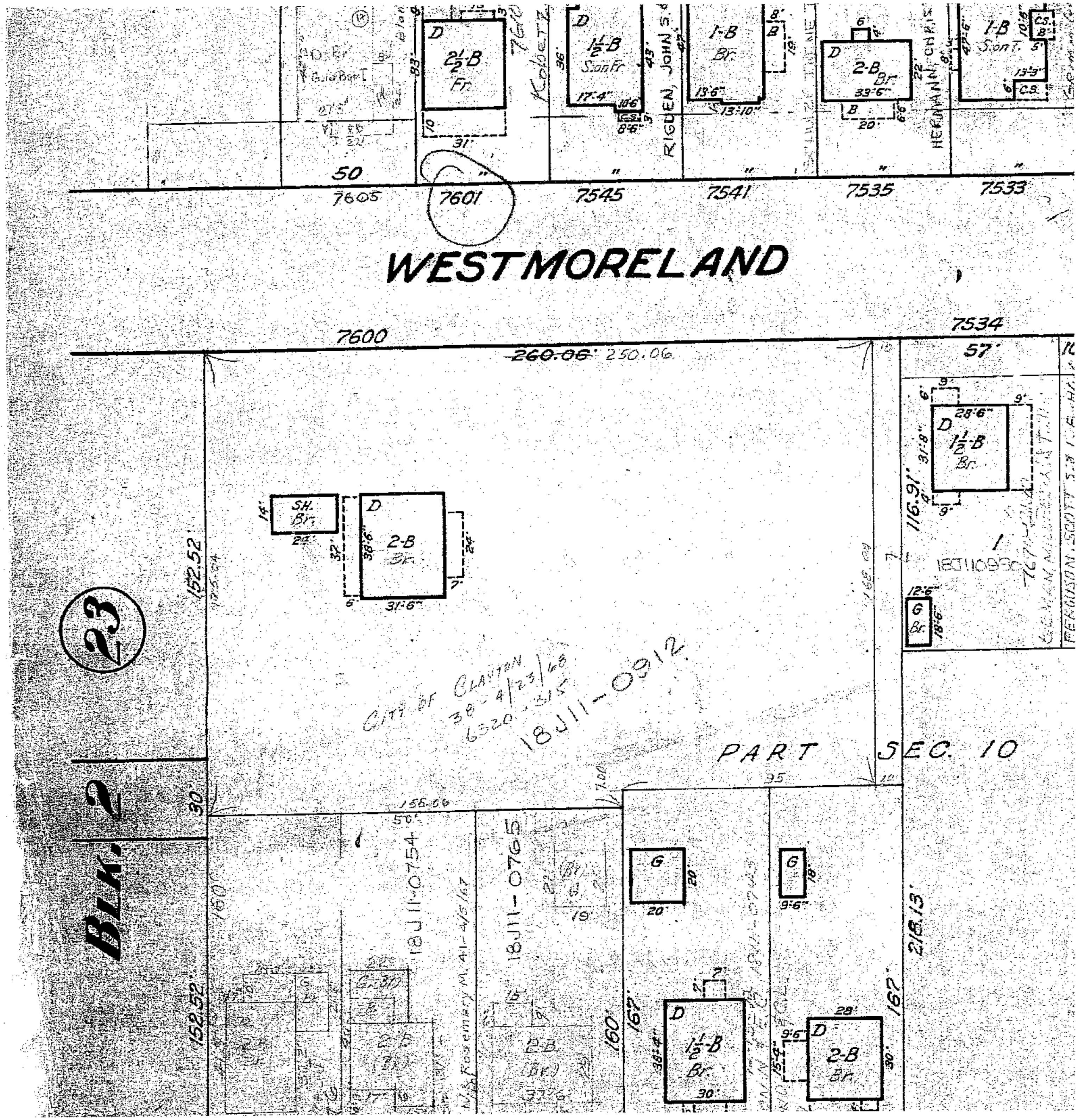
WESTMORELAND
7605
7601
7545
7541
7535
7533
50
7600
7534
260.06 250.06
57'
PART SEC. 10
City of Clayton
18J11-0912
18J11-0765
18J11-0754
RIGUEN, JOHN S.
HERMANN, CHRIS
BLK. 2
23

BILL NO. 3342
ORDINANCE NO. 3242

AN ORDINANCE PROVIDING FOR THE PURCHASE OF A TRACT OF LAND IN THE CITY OF CLAYTON, MISSOURI, KNOWN AS THE HANLEY PLANTATION, FOR PUBLIC PARK PURPOSES, AND DECLARATION OF THE AREA AS A PUBLIC PARK OF THE CITY OF CLAYTON.

WHEREAS, there exists on Westmoreland Avenue in the City of Clayton, Missouri, a tract of land fronting approximately 260' on the South side of Westmoreland Avenue, said tract having a depth southwardly of approximately 175', and

WHEREAS, said tract is improved with an historic brick residence, and

WHEREAS, said tract is desirable for acquisition by the City of Clayton, for public park purposes and for the purchase of the historic residence located thereon.

NOW, THEREFORE, BE IT ORDAINED BY THE BOARD OF ALDERMEN OF THE CITY OF CLAYTON, MISSOURI, AS FOLLOWS:

Section 1. The City Manager of the City of Clayton is authorized and directed to negotiate for the purchase for public park purposes of the following described tract of land located in the City of Clayton, County of St. Louis, State of Missouri, to-wit:

Part of a 2.00 acre tract of land shown on plat of Hanley Place, a subdivision in Section 10, Township 45 north, range 6 east, recorded in Plat Book 9, Page 49 of the St. Louis County Records; more particularly described as: beginning at a point in the south line of Westmoreland Avenue, (a public street in the City of Clayton), at its intersection with the east line of lot 8, block 2 of said Hanley Place Subdivision; then southwardly along the east line of block 2 of Hanley Place, 175.04 feet to the north line of property conveyed to Harry M. Kelsey by deed recorded in Book 435, Page 459; thence eastwardly along the north line of property conveyed to Kelsey and the north line of property conveyed to Cris L. Morey by deed recorded in Book 1226, Page 7, 155.06 feet more or less to the west line of property conveyed to Frederick C. Kamp by deed recorded in Book 970, Page 140; thence northwardly along the west line of Kamp's property; 7.00 feet to Kamp's northwest corner; thence eastwardly along the north line of Kamp's property and the north line of property conveyed to Clarence N. Hurst by deed recorded in Book 922, page 88, 105.00 feet to the west line of property now or formerly owned by Cornelia I. Essen; thence northwardly along the west line of property now or formerly of Cornelia I. Essen, and the west line of Block 4 of Hanley Place, 168.04 feet to the south line of Westmoreland Avenue; and thence westwardly along the south line of Westmoreland Avenue, 260.06 feet to the point of beginning.

which said tract is improved with a brick dwelling house and appurtenances.

Section 2. The City Manager is authorized and directed to negotiate for the purchase of the contents of said brick dwelling house.

Section 3. The City Manager of the City of Clayton is authorized to expend out of the treasury of the City not in excess of $55,000.00 for the land, building and contents described herein and to pay not in excess of said sum to the owner or owners thereof.

Section 4. Payment shall be made upon receipt by the City of Clayton of the title insurance policy insuring the City against any defect in fee simple title.

Section 5. Upon acquisition of the tract of land described in this ordinance, said tract shall be declared a public park of the City of Clayton, Missouri.

Section 6. This ordinance shall take effect and be in force from and after its passage by the Board of Aldermen.

Passed this 12th day of March, 1967.

Hy Walsh
Mayor

Attest:
City Clerk

section 7:

Appendix No. 12

Discussion of Addition to the Site

As alluded to in the Executive Summary (section 2) of this report, preliminary consideration has been given to potential addition of an Interpretive Center and / or other new, ancillary construction to the Hanley House site.

Throughout analysis and investigation of existing conditions, several discussions were conducted with City of Clayton Parks and Recreation Staff and the Hanley House Council regarding expanded program on the site. These discussions attempted to preliminarily assess the manner, method and means in which the Hanley House physical structure - as well as its historic and educational program - might best be served by new a facility and infrastructure.

In weighing the perceived impacts and synergies construction of such new program, facility and infrastructure might create, the following issues and goals were identified:

1. New construction to house Interpretive Center program - *a new, modern structure clad in an historic skin could provide space for classrooms, a small theater / auditorium, meeting rooms, rental events with catering / cooking food service capacity, administrative office function, storage, toilet facilities, gift shop, consolidated engineering system(s), etc. - see next item for additional information regarding systems consolidation.*

2. Relocation of infrastructure system(s) - *acknowledging that ancillary construction on the site would require new / additional engineering infrastructure systems, there is potential to extricate specific, existing systems from the Hanley House and gain space in the existing structure while achieving an economy of scale. Components such as a combined HVAC plant, landscaping water distribution, domestic water heating and distribution, and fire suppression water valve and distribution might be well served by consolidation and incorporation into a new structure on the site.*

3. Parking - *although presently served by on-street parking only, use and expansion of the existing driveway from the west might be considered in order to provide a limited amount of accessible parking spaces per the Americans with Disabilities Act (ADA) and building code requirements. Likewise, such an expansion might create a means for delivery or large vehicles such as tour and school buses to reach the house more directly.*

4. Accessibility - *a new, modern structure and parking / site access would be a boon to the Hanley House in terms of accessibility. As the existing structure is essentially off-limits to anyone not fully ambulatory and dextrous, an Interpretive Center would allow for on-site educational opportunities through classrooms, auditorium space, video and audio display, and possibly an elevator and linked (at or below grade) access to the house.*

It is likely that new construction on the Hanley House site would be met with skepticism or even downright opposition from some of the immediate neighbors, as the existing site is enmeshed in the fabric of an established, residential neighborhood. And the nature of Hanley House being of a specific architectural (Greek Revival) style and design would suggest that any new construction be conceived in a respectful and coordinating (exterior, at least) aesthetic.

Discussion of Addition to the Site *cont'd*

With the above in mind, potential strategies for dealing with the expectations of neighboring home-owners, as well as the issue of coordinating with the existing home's period architecture and style, have been discussed in cursory fashion. The two main themes are:

Sub-grade construction - *use of partially or wholly below-grade structure to limit intrusion on the site - access would be via ramp or elevator to provide full accessibility, and benefit of below grade construction might include economy of material and schedule (little exterior embellishment required), energy savings over life of construction, and appeasement of neighbors who could potentially object to new building(s) on the site*

vs.

Matching period (exterior) construction - *use of a stylized cladding / skin to match with the Hanley House and Summer Kitchen, which would conceal a modern interior - a new above-grade structure could be used to house consolidated infrastructure and systems, and appear as an authentic outbuilding on the Hanley site (such as a hay barn)*

Concurrent with discussions about construction of new program at the Hanley House site, a review of similar historic sites and their adaptations and / or expansions in contemporary times was carried out.

This review sought-out parallel uses of historic structures, and attempted to study how their evolving programs incorporated items such as museum and display zones, archive and records storage, meeting spaces, classrooms, auditoriums, administrative offices, toilets, kitchens and banquet halls / rental facilities, engineering and support spaces, and accessibility.

Likewise, this report sought comparison of phased renovation of an historic structure and conversion/ preservation as a museum venue. As a means of precedent comparison, the following sites and locations were discussed:

Sappington House - *Webster Groves, Missouri*

Tappmeyer Homestead - *Creve Coeur, Missouri*

Mark Twain Boyhood Home and Museum - *Hannibal, Missouri*

Mark Twain House and Museum - *Hartford, Connecticut*

Lee-Fendall House - *Alexandria, Virginia*

Each of the above sites and structures have previously (and continue to do so) dealt with numerous equal challenges. They have wrestled with modern building codes as they relate to centuries-old construction, how to achieve fire protection of existing artifacts and finishes without intruding upon the character of the structure or the space, replacement or augmentation of deteriorated engineering infrastructure and systems, issues of energy efficiency, and so forth.

Without detailing the specifics of each precedent, there are in these sites - and many more just like them - many lessons to be garnered as would inform the renovation, restoration, preservation and expansion of Hanley House and its program.

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