

April 1, 2025

Lauren Clementino
Senior Planner/Heritage Preservation Officer
Comprehensive and Neighborhood Planning
211 West Aspen Avenue
City of Flagstaff
lclementino@flagstaffaz.gov

Re: 23 E Fine Avenue / Cultural Resource Study & Proposed Project Narrative

Dear Ms. Clementino,

I am writing in regard to upcoming stabilization efforts planned for 23 East Fine Avenue in Flagstaff's North End Historic District. As we briefly discussed via email in late February, my office has been engaged by the Property Owner (Stephanie Treptow, BIB Properties & EnviroSystems Management Consultants) to assist in evaluation of portions of the existing historic structure that have begun exhibiting signs of structural and cosmetic deterioration.

A review of the property's existing conditions has been completed and findings are outlined in attached in the following Letter(s) and accompanying Preliminary Project Working Drawing Sets prepared by Sirius Structures & StudioLP4 Architecture. As the existing property is listed on the National Register of Historic Places and noted as a Contributing Resource to the North End Historic District, a Cultural Resource Study Letter Report has also been completed by EnviroSystems Management and it is likewise included in this submission. Together, these documents identify areas where structural degradation is observable and propose targeted stabilization strategies for two (2) primary areas of the existing structure. These areas, as noted in the drawings, include:

1. REPAIR SCOPE AREA #1 - SOUTH FOUNDATION WALL

- Cracking, spalling, and water intrusion is observable at the structure's primary south foundation wall. It is recommended that the existing south foundation wall be reinforced to prevent further deterioration and to prevent the potential for further deterioration. Failure to address the observed damage would lead to worsening degradation, risking occupant safety and eventual structural failure & loss of the Historic Resource.
- A new, supplemental reinforced concrete foundation wall is proposed to be installed outboard of the existing foundation wall. This wall is to reinforce the existing structure, retain lateral soil loads from grade, and allow for installation of exterior waterproofing to ensure prolonged life of the building.

2. REPAIR SCOPE AREA #2 - LEVEL 1 BAY WINDOW PROJECTION

- An original ground floor 1-story projection in the building's ground floor plan (approximately 3'-6" x 12'-6") extends from the northern-most side of the historic

structure's western exterior façade. This original building element, visible from the primary Elm Street elevation/façade, displays significant signs of structural deterioration. If left unaddressed, the degradation will lead to more advanced deterioration and eventual collapse/failure if left unaddressed.

- Based on visually observed damage patterns by the Architect and Structural Engineer, it is suspected that the 1-story bay projection's foundation footing and/or foundation stem wall was not constructed to the same depth as the 2-story portion of the existing structure or was constructed using an inadequate concrete mix, as the building's primary 2-story volume does not display visually observable signs of deterioration/damage.
- Due to the advanced deterioration at this area and suspected inadequate foundation, demolition of the failing portion of the structure and subsequent in-kind re-construction of this area is proposed. Modifications as proposed would be classified as *repairs* or *alterations* as outlined by the *2018 International Existing Building Code*. No changes to building occupancy classifications or occupancy loads are proposed.
- All proposed re-construction work shall be in accordance with the requirements of all currently adopted Building Codes, City Zoning Code, and Historic requirements as specified by the City of Flagstaff. Specific Heritage Preservation requirements for the reconstructed area are to be discussed and finalized with the City of Flagstaff's Heritage Preservation Officer to confirm acceptability. Proposed re-construction details outlined herein are intended to re-create the existing detailing of the structure to the greatest extent possible (in dimension, profile, materials, etc.) and to generally follow the as-built assemblies depicted in Section Detail 3/A.3 of the Architectural "Existing Conditions Review & Proposed Stabilization Scope" architectural drawing package issued on 03/25/2025. The reconstruction effort is to incorporate the following:
 - New Reinforced Concrete Footing - minimum depth extends to 30" Frost Line or to depth as specified by Structure to ensure future stability.
 - New Reinforced Concrete Stem Wall - exterior detailing/forms to match existing exterior foundation stem wall to remain. Details include chamfered corner at transition to brick veneer wall above, interior notched bearing point for adjacent floor framing bearing, etc.
 - New wood floor joist framing as/where required per finalized structural design.
 - New wood-framed load bearing exterior wall framing
 - New single-wythe (non-structural) brick veneer at exterior walls - finish of all new brick masonry cladding is to generally match adjacent original brick walls at the building's ground floor.
 - New Single-Hung Wood Windows – replacement wood windows to match existing wood windows that have been warped/skewed.
 - New wood roof/rafter & interior ceiling framing
 - New asphalt shingle roof - to match existing 2-story roof (to remain).

The Owner & Design Team requests that details pertaining to the above reconstruction be discussed with the Heritage Preservation Officer to determine Heritage Preservation Requirements in advance of

preparation of Construction Documents and Permit Application. Reconstruction efforts may require use of more contemporary replacement materials and contemporary building components/assemblies to meet material sourcing limitations and/or the performance requirements of current Building Codes for New Construction. Historic Materials and/or assembly details that are likely to require modern substitution include:

- **Cast Concrete Foundation / Stem Wall**
 - Existing stem wall & footing has observable damage and will require removal. (See Photographs 1 & 2 below)
 - **The proposed re-construction would utilize contemporary steel reinforced concrete mixtures to replace the failing foundation stem wall with a new structurally adequate concrete stem wall. New construction is to match the existing profile and visual dimension(s) of the existing/damaged wall. (Concrete performance specification & and reinforcement design per Sirius Structures). Finish of the new concrete stem wall is proposed to match existing portions of the existing / adjacent foundation wall to remain, with the new stem wall painted to match existing.**



Photograph 1 – Foundation



Photograph 2 - Foundation

- **Brick Masonry – General Materials**
 - Existing exterior brick masonry utilizes non-modular full-sized bricks at the ground floor exterior walls in a 50/50 typical "running bond" pattern utilizing typical 3/8" mortar joints. These non-modular "Standard" sized masonry units (measuring 3-5/8" [D] x 2-1/4" [H] x 8" [L]), not typically utilized in contemporary masonry construction, can be difficult to source, with limited options readily available from material suppliers. The existing brick throughout the building's exterior has been previously painted and existing masonry finish appears generally consistent with contemporary "facing brick" - i.e., bricks intended for exposed installation where appearance is important. (See Photographs 3 & 4).



Photograph 3 – Typical Existing Brick Masonry

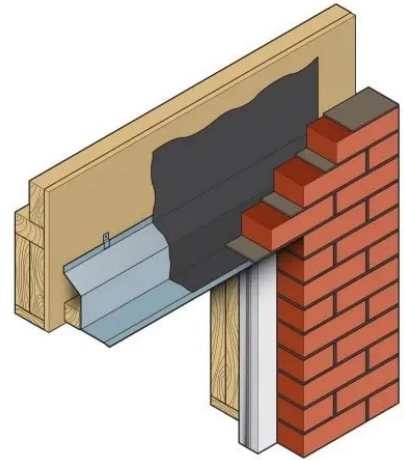


Photograph 4 – Typical Existing Brick Masonry

- The proposed re-construction would utilize more common contemporary "Modular" sized facing brick masonry units (Measuring 3-5/8" [D] x 2-1/4" [H] x 7-5/8" [L]) in 50/50 running bond, with standard 3/8" mortar joints, to allow for more readily available material sourcing. These contemporary brick dimensions will align with existing vertical coursing with only minimal (~3/8") variation in length when compared to the existing masonry. Length variation differences between the existing "Standard" and the new "Modular" units are expected to be visually indiscernible after new construction is painted to match existing portions to remain.
- **Brick Masonry – Headers & Lintels**
 - Existing window openings at the historic residence utilize a "masonry flat arch" (also known as a "jack arch") structural technique for supporting brick cladding located above exterior window openings (see Photograph 5). This historic, self-supporting detail, utilizing gradual a gradually increasing installation angle of vertically oriented bricks, does not reflect present day masonry construction conventions, nor is it compatible with present Building Code requirements.
 - **The proposed re-construction would utilize contemporary steel angles as lintels/headers to carry the weight of the proposed brick masonry veneer over window openings. All steel lintels are to be painted to match adjacent brick construction. To maintain visual consistency with adjacent brick masonry openings, non-structural brickwork at new openings is proposed to be installed in vertical "Soldier Course" orientation to remain visually consistent with adjacent masonry flat arch. Similarly to the modular brick sizing, this minor variation is expected to be visually indiscernible after new construction is painted to match existing portions to remain. (See Figures 1 & 2 on following sheet).**



Photograph 5 - Existing "Flat Arch" Brick Masonry



*Figure 1 - Diagrammatic Lintel Detail
(Note - masonry to be installed in vertical Soldier Course orientation at new lintel to provide visual consistency with existing / adjacent brickwork to remain.)*

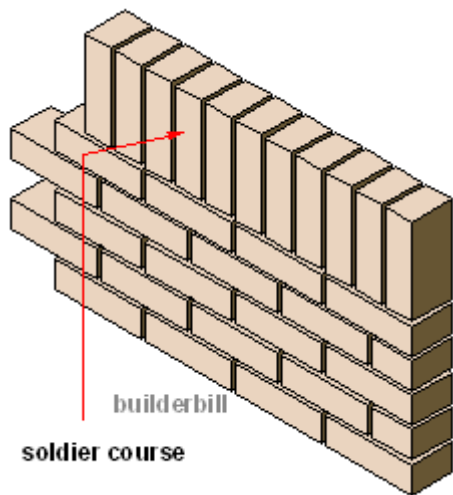


Figure 2 - Soldier Course over 50/50 Running Bond

- **Wood Framing & General Interior Wall Finishes - General Materials**

- Existing Building framing (exposed to view at basement) utilizes historic rough-sawn old growth lumber, common in the early 20th century, that exceeds contemporary lumber sizing (where a 2x4 measures 3-1/2"x 1-1/2", etc.)
- Existing interior walls are finished with historic plaster & lath.
- **The proposed re-construction would utilize contemporary lumber sizes/dimensions where required in accordance with contemporary dimensional lumber (2x4, 2x6, etc.) production and product availability.**

- **The proposed re-construction would utilize standard 5/8" gypsum wall board covering (joints taped & surface hand finished to match adjacent plaster) at the interior face of all reconstructed walls.**
- **The materials noted above may (pending finalized wall assembly details) result in minor interior dimension variations at the building's reconstructed interior. Overall interior changes are expected to be 1"-2" at maximum.**
- **New wall assembly is to meet all requirements (bracing, veneer attachment, weather barrier, cavity insulation, etc.) of the 2018 IBC.**

- **Roof Framing & Roof System**
 - Existing rafters are not visible to view, but are assumed to be of historic rough-sawn dimensions & similar to other existing framing that is observable. The structure's existing asphalt shingle roof system reflects present-day architectural asphalt shingles (to remain or be replaced in-kind at the 1-story projection).
 - **The proposed re-construction would utilize contemporary lumber sizes/dimensions in accordance with contemporary dimensional lumber (2x4, 2x6, etc.) production and product availability.**
 - **The proposed re-construction would utilize exterior bead-board style soffit cladding and match existing roof eave extension dimensions to match existing/adjacent eaves at the primary 2-story portion of the structure.**
 - **The proposed new asphalt shingle roof is to match the in-place roof above (architectural grade asphalt shingles). Installation is to conform with all requirements of the 2018 IBC.**

- **Exterior Windows**
 - Existing wood windows at the 1-story ground floor bay appear original and utilize single pane glazing. Fixed portion upper sashes utilize divided lite muntins in various dimensions per location (see more below) while operable sashes feature full-lite sashes without divided lites/muntins.
 - Windows at the north and south façades appear to be single unit single-hung style sash windows with period correct rope-and-weight counter balancing.
 - The window at the west façade appears to be a multi-unit wood window consisting of (1) fixed center window flanked by (2) operable single hung rope-and-weight windows located at both sides.
 - Window frames at the north & south facades have racked substantially due to the building's differential settlement and are no longer plumb. Sashes in these locations are not operational and do not fully close, with open triangular air gaps at joint between lower sash and wood sill.
 - The multi-unit western-facing window remains comparatively less skewed and without noticeable air gaps. However, this window is not vertically plumb due to foundation settlement and minor bucking of the surrounding exterior brick veneer. (See Photographs Below)

- The reconstruction proposes use of new historic reproduction wood windows to match the existing windows as closely as possible. Traditional Wood windows (wood at interior and exterior) are proposed (in lieu of more contemporary pre-finished aluminum-clad wood windows) to allow for exterior paint-matching to ensure new windows visually blend with the existing historic windows at adjacent portions of the property.
- Specific requirements of replacement windows are requested to be discussed with the HPO to aid in selection of an appropriate replacement product. Unless problematic with Heritage Preservation requirements, it is assumed that the historic replacement windows will conform to all applicable 2018 Building & Energy Code requirements and incorporate modern assemblies to the extent appropriate (insulated glazing to achieve Energy Code U-Factor criteria, etc.).





Ms. Clementino, we look forward to working with you to ensure that 23 East Fine Avenue continues to contribute to Flagstaff's built history for decades to come. If you have any questions or concerns prior to meeting to discuss these preliminary plans further, please feel free to get in touch via the below contact information.

Thank you in advance.
Sincerely,