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ARCHITECTURE & CONSTRUCTION

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May 28, 2019

City of Dublin  
Architectural Review Board  
5200 Emerald Parkway  
Dublin, Ohio 43017

Re: 109 South Riverview Street- Application for proposed chimney revisions

Dublin ARB Board Members,

In our updated ARB application for the chimney revisions at 109 S. Riverview Street, we wanted to outline the key technical elements that allowed us to reduce the chimney mass, and help facilitate our shared goal in reducing the overall chimney presence on this façade.

In our application we are working to address the Board's previous notes asking us to reduce the size and mass of the new proposed chimney on the South Riverview facing façade of the addition- as well as meeting the owner's objectives relating to floor plan, and the use of full width brick construction for long term reliability.

#### Revisions:

##### Firebox

- We changed the proposed firebox from a wood burning insert unit (wood framed construction), to a full masonry 'Modified Rumford' style firebox
  - The masonry 'Rumford' firebox configuration located the flu more directly above the actual firebox (vs. a traditional style firebox- masonry or insert)
  - This pulls the chimney location into the building mass and, due to the slope of the roof, raises the chimney's exit elevation by **5 additional inches**, requiring less exposed brick above the roof line (this room has a vaulted ceiling) to meet the Building Code mandated 24" vertical clearance to adjacent roof elements (within 10'-0" of the chimney mouth)
  - Switching to a masonry firebox has structural advantages as well for chimney construction options, and allows us to use a masonry chimney

## Chimney

- Switching to a full masonry firebox and chimney allows us to construct the chimney without wood framing
  - Without combustible framing we can reduce chimney size by both the physical framing member dimensions, and required combustible clearances
    - For reference an insert firebox, with a standard 13" diameter flu, would require:
      - Full brick exterior- minimum 32" x 32" overall square chimney required (*shown in previous application*)
      - 'Thin brick' exterior- minimum 30" x 30"+/- overall square chimney required
    - The full masonry Rumford firebox requires a **13" x 17"** ceramic flu
      - With this flu size, and construction method, we were able to reduce the out-to-out dimensions of the masonry chimney (above the roof) to a **21" x 30" rectangle** shape

The results of these revisions have allowed us to **shrink** the proposed chimney by **35% in overall width (side facing South Riverview Street)**, and **7% in overall depth (facing side yard)**. This flu size, along with the firebox construction proposed, shifts the outward facing chimney planes further up the roof slope, and into the building mass- **12" to the North**, and **7 ½" to the West**.

We feel that these proposed updated are in line with the Board's request and look forward to reviewing them with you. Thank you again for your time and consideration on our proposal,



Nathan Sampson, RA  
Principal  
Behal Sampson Dietz