

Mary 19, 2021

Julia Ryan & Cody Kilian
President and Vice President of the Board
Cityview Cooperative
1801 & 1807 & 1811 Elliot Ave
Minneapolis, MN 55404



Re: Cityview Cooperative – 2021 Exterior Façade Repair Project: Phase I
Structural Repair Addendum – Architectural Code Review
Encompass, Inc. Project # 7311-001

Dear Cityview Cooperative,

At the request of the Board, this letter is being provided to Atlas Restoration and Construction to outline the architectural code review performed by Encompass, Inc., as it relates to material selection for the structural repairs performed along the east elevation of 1801 Elliot Ave in Minneapolis, MN.

The original conversion of the property to a cooperative was performed in 1981. The original conversion repair drawings prepared by Design Collective dated December 1, 1981 indicates a required 1-hour fire rating for exterior walls. The applicable building code at that time would have been 1980 State Building Code which adopted the 1979 Uniform Building Code.

The existing wall construction appears to have varying interior gypsum thickness of $\frac{1}{2}$ " to $\frac{5}{8}$ ", 2x4 rough sawn wall framing, and $\frac{3}{4}$ " tongue and groove planks (exterior sheathing). The wall cavity was insulated with batt insulation. The exterior finish consisted of stucco. The original wall framing was balloon framed at floor lines and wall cavities were continuous through multiple floor lines.

The 2020 Minnesota State Building Code identifies this structure as:

- Occupancy type R2 (per Chapter 3)
- Construction type V non sprinklered (per Chapter 6)

This type of construction and occupancy requires a 1-hour fire rating for primary structural frame (Chapter 6). This is similar to references in the original conversion documents that indicate a 1-hour fire rating for exterior walls.

Per the 2020 Minnesota Conservation Code for Existing Buildings (Section 403.1), the repairs shall maintain the level of fire protection provided (at time of construction).

The existing wall assembly is similar to a 1-hour fire rated exterior wall assembly UL-U348 which uses 7/16" exterior plywood (non-fire rated), aligned vertically with horizontal joints blocked. Based on UL-348 this is the material that is recommended to replace the existing exterior ¾" tongue and groove planks at locations of substantial structural repairs. See attached UL document for reference.

See Structural Addendum dated May 12, 2021 for structural repair design.

This report is prepared based on observations and review of the limited quantity of material available as of this date. Our opinions may be revised based on the availability of additional data.

The conclusions contained herein represent our professional opinions. These opinions were arrived at in accordance with accepted engineering practices at this time and location. No other warranty is implied or intended.

Respectfully submitted,

ENCOMPASS, INC.

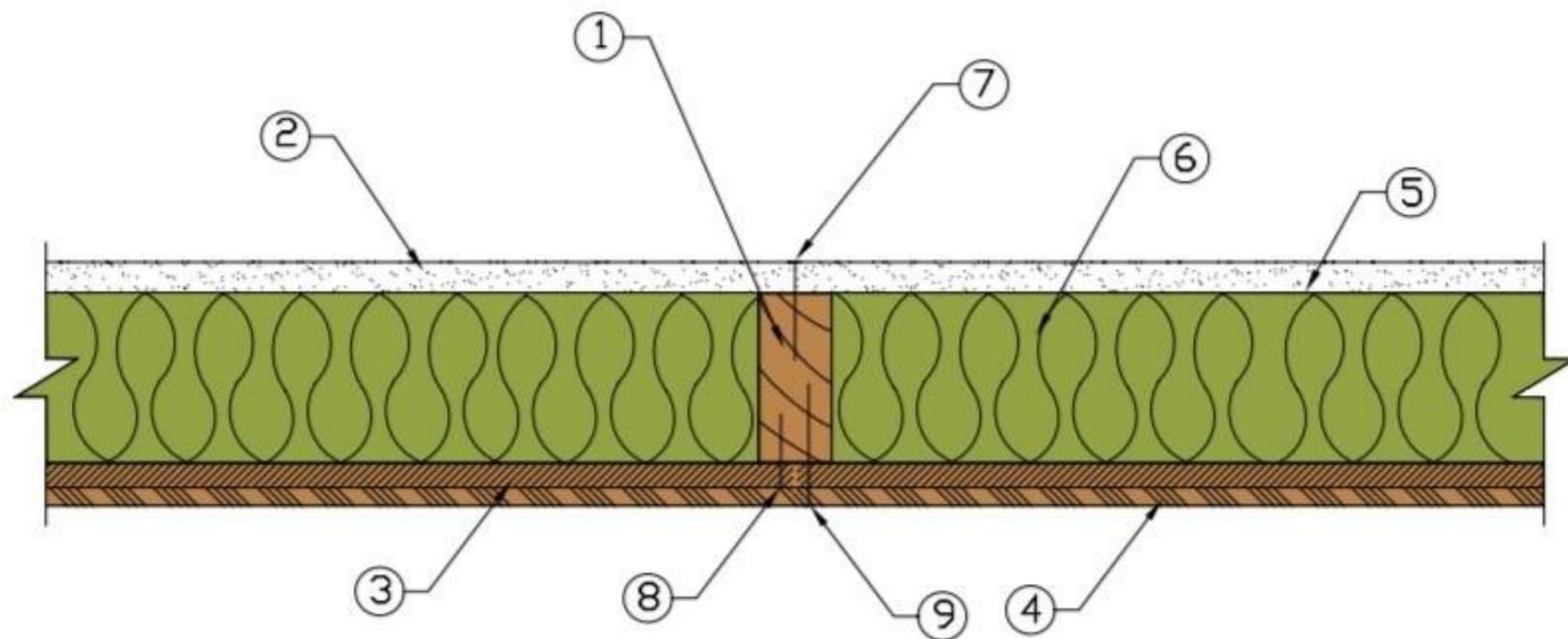
I hereby certify that this letter was prepared by me or under my direct supervision and that I am a duly Licensed Professional Architect under the laws of the State of Minnesota.



Larry Kemp, registered architect
Sr. Project Architect
Reg. Number: 42239

WS4-1.3 One-Hour Fire-Resistive Wood-Frame Wall Assembly

2x4 Wood Stud Wall – 78% Design Load – ASTM E 119/NFPA 251



1. Framing - Nominal 2x4 wood studs, spaced 16 in. o.c., double top plates, single bottom plate
2. Interior Sheathing - 5/8 in. Type X gypsum wallboard, 4 ft. wide, applied vertically, unblocked
3. Exterior Sheathing - 1/2 in. fiberboard sheathing. *Alternate construction - minimum 1/2 in. lumber siding or 1/2 in. wood based sheathing.*
4. Exterior Siding - 3/8 in. hardboard shiplap edge panel siding. *Alternate construction - lumber, wood based, vinyl, or aluminum siding.*
5. Vapor Barrier - 4-mil polyethylene sheeting
6. Insulation - 3-1/2 in. thick mineral wool insulation (2.5 pcf, nominal)
7. Gypsum Fasteners - 6d cement coated box nails spaced 7 in. o.c.
8. Fiberboard Fasteners - 1-1/2 in. galvanized roofing nails - 6 in. o.c. in the field, 3 in. o.c. panel edges
9. Hardboard Fasteners - 8d galvanized nails - 8 in. o.c. in the field, 4 in. o.c. panel edges
10. Joints and Fastener Heads - Wallboard joints covered with paper tape and joint compound, fastener heads covered with joint compound

Tests conducted at the Gold Bond Building Products Fire Testing Laboratory

Test No: WP-584 (Fire Endurance & Hose Stream) March 19, 1981

Third Party Witness: Warnock Hersey International, Inc.
 Report WHI-690-003

This assembly was tested at 78% design load using an l/d of 33, calculated in accordance with the 2005 *National Design Specification® for Wood Construction*. The authority having jurisdiction should be consulted to assure acceptance of this report.