

To: Building Safety Codes Office, Manning, AB

From: Menush Akbari, P.Eng., BEMP, CPHC, CMVP

Date: May 31, 2022

Re: Del-Air Manning Redevelopment - Building Permit Energy Analysis

Overview

Harmony Engineering Limited has been retained by JMAA to provide the Building Permit Energy Modelling Analysis for Del-Air Manning Redevelopment located in Manning, Alberta. We have completed a preliminary energy analysis which shows that the proposed design of the addition meets the minimum energy code requirement of NECB 2017. The expected energy savings of the proposed design is 22% when compared to the reference building as modelled to the Part 8 of NECB 2017.

The preliminary energy analysis is based on the Architectural Issued for Consultant Coordination drawings dated January 24, 2022, and the Mechanical Issued for 90% Review drawings dated February 25, 2022.

Harmony Engineering will be updating the preliminary energy model with the information from the Building Permit drawing set when available to confirm compliance for Building Permit submittal. It is expected that the addition for Del-Air Manning Redevelopment will still meet the minimum energy code requirement.

Some of the energy efficiency measures of Del-Air Manning Redevelopment are as follows:

- Low Fenestration and door to wall ratio ~ 16 %
- High performance windows ~ triple glazed, U-values 1.10 to 1.25 W/m²K
- Condensing Boilers ~ 95% efficiency
- Condensing Domestic Hot Water heater ~ 95% efficiency
- Kitchen Make-Up-Air unit comes with demand control ventilation
- Energy Recovery Ventilator for ventilation air ~ 70% Sensible Recovery Effectiveness

Based on the information in this letter, the current design is on track to meet the minimum energy code requirement for the Town of Manning, Alberta.

Should you have any questions, please do not hesitate to contact the undersigned.

HARMONY ENGINEERING LIMITED

Prepared By:

A handwritten signature in black ink, appearing to read "Menush Akbari", written in a cursive style.

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