NORTONSCHMIDT
Consulting Engineers

March 8, 2023

Mr. Jerome Galba
Hawthorn Projects
1964 Linn St
North Kansas City, MO 64116
Phone: 816-559-7722
Email: jerome@hawthornproject.com

RE: COMMERCIAL RETAIL – RTU ADDITION **JOB #2023-0623**
1138 NE DOUGLAS STREET
LEE'S SUMMIT, MISSOURI

Dear Mr. Galba:

This letter is in regard to the new RTU equipment being installed on the roof of the above referenced address. The purpose of this letter is to determine if structural modifications are required due to the additional weight of the new equipment. I would like to present my findings and these opinions for your information.

Information provided to our office for this review or observed on site on Wednesday, March 8, 2023, is as follows:

1. The weight of the new unit is approximately 450 lbs.
2. The existing roof framing consists of open web steel bar joists spaced at 6'-0" on center.
3. The joists bear on masonry block at the west exterior wall and on steel beams at the interior support and east exterior wall.

Evaluation of the existing framing is based on the following design criteria/assumptions:

1. The existing framing is structurally adequate to carry the current live and dead loads imposed on the framing.
2. There is no damage or deterioration to the existing framing members that would reduce their load carrying capacity.
3. The live load requirement on the roof is 20 psf.
4. The existing dead load on the roof framing is 15 psf.
5. The placement of the new RTU will be per the mechanical drawings provided to our office, dated 02/15/2023.

Section 502.4 of the 2018 International Existing Building Code states:
Any existing gravity load-carrying structural element for which an addition and its related alterations cause an increase in design dead, live or snow load, including snow drift effects, of more than 5 percent shall be replaced or altered as needed to carry the gravity loads required by the International Building Code for new structures.

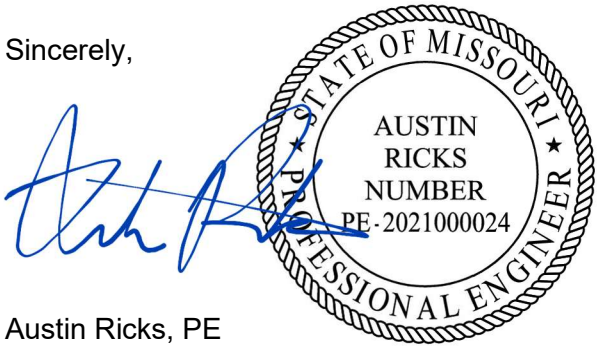
The increase in the joist reaction at the new unit location is approximately 3.8%. This is less than 5% and therefore, it is my opinion that the joist is capable of supporting the load of the new RTU. However, the unit will require the support of a steel angle frame between the joists and strengthening of the top chord where the new load is not located at joist panel points. Refer to the attached sketches for further information.

This evaluation was based on the information provided and the design assumptions listed above. When evaluating building components, it is required that certain assumptions be made regarding the existing conditions. Because these assumptions may not be verifiable without expending added sums of money, or destroying adequate or serviceable portions, the owner or recipient of this report agrees that, except for negligence on the part of the engineer, we will be held harmless, and indemnified and defended, by you from and against all claims, loss, liability or expense, including legal fees arising out of the services provided by this report.

If discrepancies with the assumptions listed within this letter are discovered, they shall be brought to the immediate attention of the Engineer.

If you have any questions or need any additional information, please feel free to contact me.

Sincerely,



Austin Ricks, PE
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Norton & Schmidt
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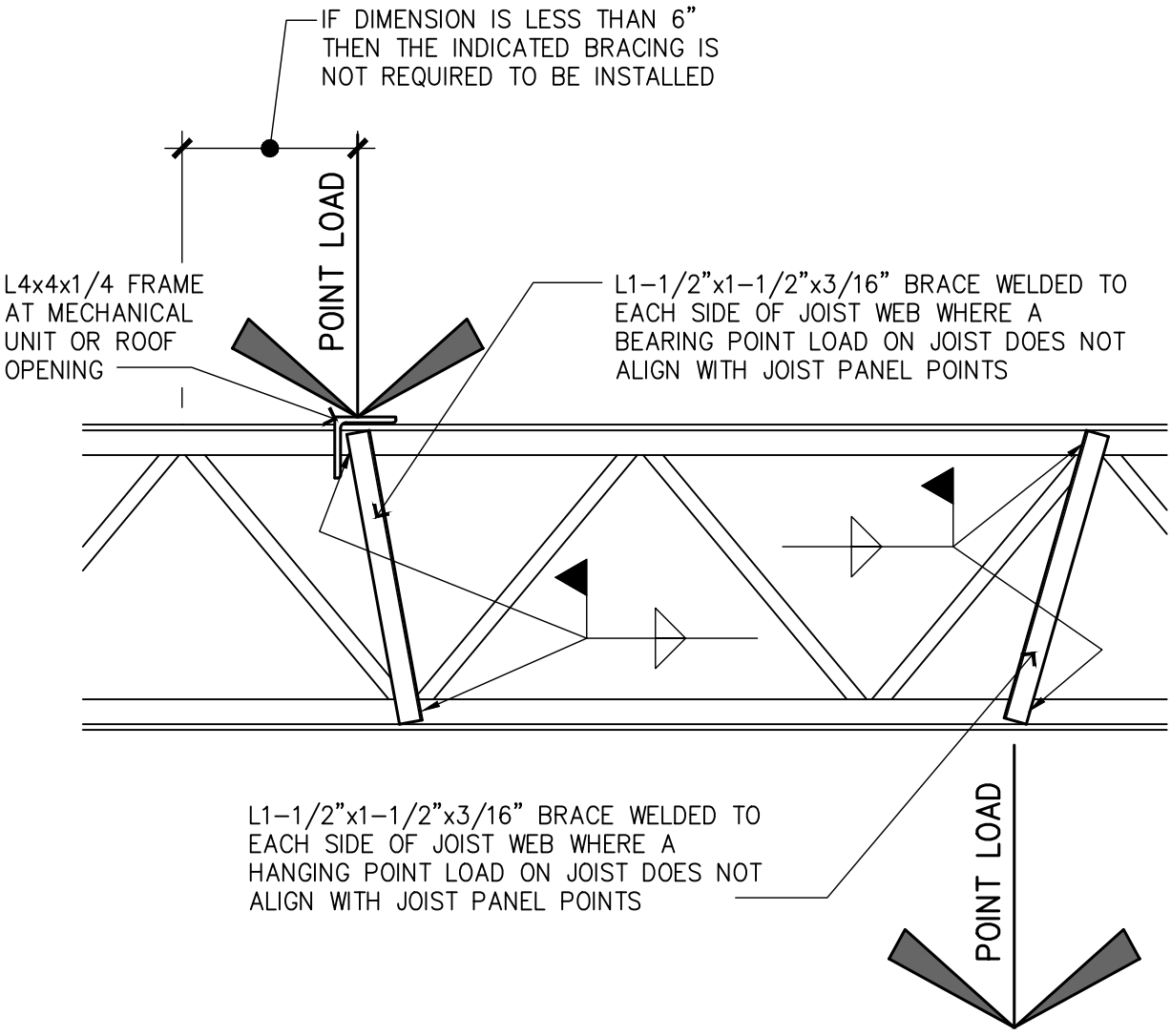
Project:	Commercial Retail RTU Addition				
Address:	1138 NE Douglas St, Lee's Summit, MO 64086				
Date:	08-Mar-23	Drawn by:	AGR	Checked by:	AGR
Job No.	2023-0623	Sheet No.	3	of	4



JOIST REINFORCING DETAIL

SCALE: 1" = 1'-0"

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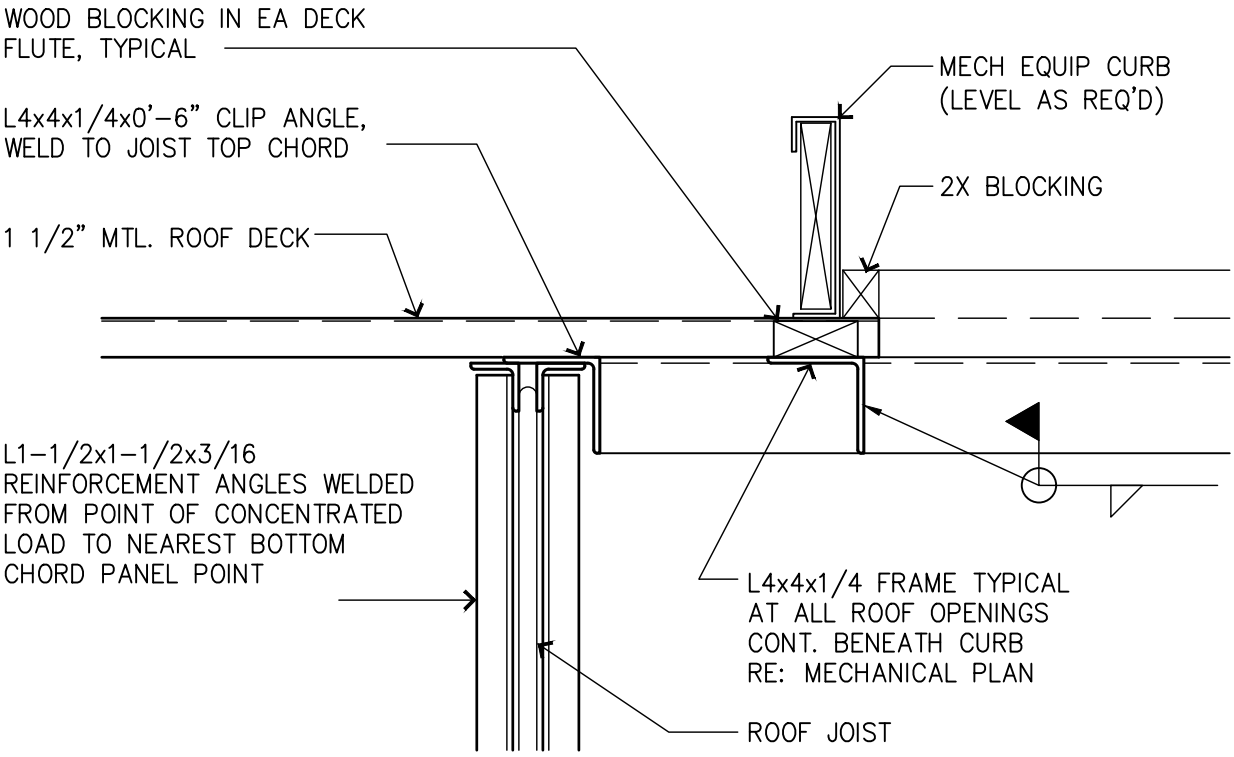
Project: Commercial Retail RTU Addition
Address: 1138 NE Douglas St, Lee's Summit, MO 64086
Date: 08-Mar-23 Drawn by: AGR Checked by: AGR
Job No. 2023-0623 Sheet No. 4 of 4



RTU CURB SUPPORT DETAIL

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