Supplement dated August 9, 2024 (To Supplement dated November 4, 2022, Prospectus Supplement dated August 25, 2021 and Prospectus dated August 6, 2021)



Up to \$50,000,000 Additional Shares of Common Stock

This supplement (this "Supplement") amends and supplements that certain prospectus supplement dated August 25, 2021 (the "Prospectus Supplement"), which was amended and supplemented by that certain supplement dated November 4, 2022 ("Supplement No. 1"), relating to the offer and sale of shares of common stock, par value \$0.01 per share, of Cherry Hill Mortgage Investment Corporation from time to time through Citizens JMP Securities, LLC (formerly known as JMP Securities LLC, "Citizens JMP") and B. Riley Securities, Inc. ("B. Riley Securities"), as our agents. Sales of our common stock, if any, pursuant to this Supplement, Supplement No. 1, the Prospectus Supplement and the accompanying prospectus dated August 6, 2021 (the "Prospectus") will be made by any method permitted by law that is deemed to be an "at the market offering" as defined in Rule 415 under the Securities Act of 1933, as amended. This Supplement should be read in conjunction with Supplement No. 1, the Prospectus Supplement and the Prospectus. Capitalized terms used and not defined in this Supplement shall have the meanings given to such terms in the Prospectus Supplement.

This Supplement is being filed to reflect that we amended our Sales Agreements with Citizens JMP and B. Riley Securities and entered into a new Sales Agreement with BTIG, LLC ("BTIG") on terms that are identical to the terms of our Sales Agreements with Citizens JMP and B. Riley Securities in order to (i) add BTIG as an Agent and (ii) increase the aggregate public offering price of the shares of common stock that can be offered and sold through the Agents pursuant to the Sales Agreements by an additional \$50.0 million in shares of common stock. Accordingly, each reference to the terms "Agent" and "Agents" in the Prospectus Supplement and Supplement No. 1 is hereby amended to include BTIG, and each reference to the terms "Sales Agreement" and "Sales Agreements" is hereby amended to refer the Sales Agreements with each of Citizens JMP, B. Riley Securities and BTIG.

As of the date of this Supplement, the maximum aggregate public offering price of our common stock that can be offered and sold pursuant to the Sales Agreements is \$150.0 million, and we have sold 13,890,482 shares of our common stock pursuant to the Sales Agreements for gross proceeds of \$95,224,253, net of commissions and fees of approximately \$1,904,485, leaving \$54,775,747 available for issuance and sale from time to time under the Sales Agreements.

Our common stock is traded on the NYSE under the symbol "CHMI." The last reported sale price of our common stock on the NYSE on August 8, 2024 was \$3.64 per share.

There are restrictions on transfer and ownership of our common stock intended to, among other purposes, preserve our qualification as a real estate investment trust for U.S. federal income tax purposes. Please see the section entitled "Restrictions on Ownership and Transfer" in the Prospectus.

References in this Supplement to the terms "we," "us" and "our" refer to Cherry Hill Mortgage Investment Corporation.

Investing in our common stock involves risk. See "Risk Factors" beginning on page S-3 of the Prospectus Supplement and page 3 of the Prospectus and in "Item 1A. Risk Factors" in our Annual Report on Form 10-K for the year ended December 31, 2023 and other reports and information that we file from time to time with the Securities and Exchange Commission (the "SEC"), which are incorporated by reference into this Supplement, Supplement No. 1, the Prospectus Supplement and the Prospectus.

Neither the SEC nor any state securities commission has approved or disapproved of these securities or determined if this Supplement, Supplement No. 1, the Prospectus Supplement and the Prospectus are truthful or complete. Any representation to the contrary is a criminal offense.

Citizens JMP

B. Riley Securities

BTIG