

VIA EDGAR

Office of Manufacturing
Division of Corporation Finance
Securities and Exchange Commission
100 F Street NE
Washington, D.C. 20549-3561

Attention: Thomas Jones
Erin Purnell

**Re: Mobix Labs, Inc.
Registration Statement on Form S-1
Filed April 16, 2024
File No. 333-278710**

Ladies and Gentlemen:

This letter is submitted on behalf of our client, Mobix Labs, Inc., a Delaware corporation (the “Company”) in response to the comments from the staff of the Division of Corporation Finance (the “Staff”) of the Securities and Exchange Commission (the “Commission”) in a letter to the Company dated April 23, 2024 (the “Comment Letter”) with respect to the above referenced registration statement on Form S-1 filed with the Commission on April 16, 2024 (the “Registration Statement”). In connection with this letter responding to the Staff’s comments, the Company is filing Amendment No. 1 to the Registration Statement (the “Amendment No. 1”), which will include changes in response to the Staff’s comments.

The numbered paragraphs and headings below correspond to those set forth in the Comment Letter. Each of the Staff’s comments is set forth in bold, followed by the Company’s response to each comment. Capitalized terms used in this letter but not defined herein have the meaning given to such terms in Amendment No. 1. All references to page numbers in these responses are to pages of Amendment No. 1.

Registration Statement on Form S-1 filed April 16, 2024

Cover Page

- For each of the securities being registered for resale, disclose the price that the Selling Securityholders paid for such securities.**

Response: The Company has revised its disclosure on the cover page by adding the effective purchase price for the Advisor Shares. There is no purchase price for the Settlement Shares, as such shares were issued pursuant to an employment-related settlement agreement.

- Disclose the exercise price(s) of the warrants compared to the market price of the underlying security. We note that the warrants are out the money. Please disclose the likelihood that warrant holders will not exercise their warrants. Provide similar disclosure in the prospectus summary, risk factors, MD&A and use of proceeds section and disclose that cash proceeds associated with the exercises of the warrants are dependent on the stock price. As applicable, describe the impact on your liquidity and update the discussion on your ability to fund your operations on a prospective basis with your current cash on hand.**

Response: The Company has revised its disclosure on the cover page and pages 7, 27, 32, 40 and 50 to address the Staff’s comment.

3. **We note the significant number of redemptions of your Class A Common Stock in connection with your business combination and that the shares being registered for resale on this Form S-1 and your Form S-1 filed on April 2, 2024, relating to your committed equity facility with B. Riley Principal Capital II, LLC, will exceed your public float. We also note that certain of the shares being registered for resale were purchased by the Selling Securityholders for prices considerably below the current market price of the Class A Common Stock. Please highlight the significant negative impact sales of shares on this registration statement, and separately, combined with the sales of shares in your Form S-1 filed on April 2, 2024, could have on the public trading price of the Class A Common Stock. Highlight the significant negative impact sales of shares on this registration statement could have on the public trading price of the Class A Common Stock.**

Response: The Company has revised its disclosure on the cover page and pages 2 and 27 to address the Staff's comment.

4. **Please ensure that the disclosure on the cover page about the number of shares registered for resale is consistent with the disclosure about the number of shares disclosed in the Selling Securityholders table beginning on page 90. For example, the disclosure in the twelfth bullet point on the cover page about up to an additional 1,052,030 make-up shares does not appear to be consistent with the disclosure beginning on page 90.**

Response: The Company has revised its disclosure on pages 94 through 99 to address the Staff's comment. Additionally, with respect to the Make-Whole Shares, there is one additional share being registered due to fractional shares.

Summary of the Prospectus, page 1

5. **In light of the significant number of redemptions, expand your discussion of capital resources to address any changes in the company's liquidity position since the business combination. If the company is likely to have to seek additional capital, outside of the Form S-1 filed on April 2, 2024, which we note you already discuss in your document, discuss the effect of this offering on the company's ability to raise additional capital.**

Response: The Company respectfully acknowledges the Staff's comment and notes that this issue has been addressed, as the Company has updated the Management's Discussion and Analysis section to reflect the Company's liquidity position as of its second fiscal quarter. The Company has revised its disclosure on page 3 to include a discussion with respect to the effect that this offering has on the Company's ability to raise additional capital.

6. **Please expand your discussion here to reflect the fact that this offering involves the potential sale of a substantial portion of shares for resale and discuss how such sales could impact the market price of the company's common stock. Your discussion should highlight the fact that the selling securityholders will be able to sell their shares for so long as the registration statement of which this prospectus forms a part is available for use.**

Response: The Company has revised its disclosure on page 2 to address the Staff's comment.

7. **Include an additional risk factor highlighting the negative pressure potential sales of shares pursuant to this registration statement could have on the public trading price of the Class A Common Stock. To illustrate this risk, disclose the purchase price of the securities being registered for resale and the percentage that these shares currently represent of the total number of shares outstanding. Also disclose that even though the current trading price is significantly below the SPAC IPO price, the private investors have an incentive to sell because they will still profit on sales because of the lower price that they purchased their shares than the public investors.**

Response: The Company has revised its disclosure on pages 5, 21 and 22 to address the Staff's comment.

Security Ownership of Certain Beneficial Owners and Management, page 88

8. **Please ensure that the disclosure about the amount of beneficial ownership in the table on page 88 is consistent with the disclosure in the table beginning on page 90.**

Response: The Company has revised its disclosure on pages 92 and 93 to address the Staff's comment.

General

9. **Revise your prospectus to disclose the price that each selling securityholder paid for the shares being registered for resale. Highlight any differences in the current trading price, the prices that the selling securityholders acquired their shares, and the price that the public securityholders acquired their shares. Disclose that while the selling securityholders may experience a positive rate of return based on the current trading price, the public securityholders may not experience a similar rate of return on the securities they purchased due to differences in the purchase prices and the current trading price. Please also disclose the potential profit the selling securityholders will earn based on the current trading price. Lastly, please include appropriate risk factor disclosure.**

Response: The Company has revised its disclosure on the cover page and pages 21, 22 and 94 to address the Staff's comment.

10. **Please tell us why you are registering for resale at this time the 3,500,000 earnout shares mentioned in the second bullet point on the cover page. In this regard, we note the disclosure on page F-35 that the earnout shares have a seven-year earnout period commencing on the date that is the one year anniversary of the closing.**

Response: The Company respectfully acknowledges the Staff's comment and will no longer be registering the Earnout Shares pursuant to this registration statement. Accordingly, the Company has revised its disclosure on the cover page and has disclosed on page 8 that the Earnout Shares are not being registered.

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If you have any questions or comments concerning this submission or require any additional information, please do not hesitate to contact Laurie L. Green, Esq. at (954) 765-0500.

Very truly yours,

Greenberg Traurig, P.A.

By: /s/ Laurie L. Green
Laurie L. Green, Esq.

cc: Keyvan Samini, President and Chief Financial Officer