

## UNITED STATES SECURITIES AND EXCHANGE COMMISSION WASHINGTON, D.C. 20549

March 24, 2021

Peter Bordes
Executive Chairman
Trajectory Alpha Acquisition Corp.
c/o Paul, Weiss, Rifkind, Wharton & Garrison LLP
1285 Avenue of the Americas
New York, New York 10019

Re: Trajectory Alpha Acquisition Corp.
Draft Registration Statement on Form S-1
CIK No. 0001846750
Submitted February 26, 2021

Dear Mr. Bordes:

We have reviewed your draft registration statement and have the following comments. In some of our comments, we may ask you to provide us with information so we may better understand your disclosure.

Please respond to this letter by providing the requested information and either submitting an amended draft registration statement or publicly filing your registration statement on EDGAR. If you do not believe our comments apply to your facts and circumstances or do not believe an amendment is appropriate, please tell us why in your response.

After reviewing the information you provide in response to these comments and your amended draft registration statement or filed registration statement, we may have additional comments.

## <u>Draft Registration Statement on Form S-1</u>

## General

1. We note that you filed an S-1 on March 8, 2021. The staff will review the S-1 when you file an S-1/A that is responsive to the comments contained in this letter.

## Principal Stockholders, page 140

2. Please identify if any of the directors or executive officers are managers of or are otherwise affiliated with Trajectory Alpha Sponsor.

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You may contact Dale Welcome at 202-551-3865 or John Cash at 202-551-3768 if you have questions regarding comments on the financial statements and related matters. Please contact Erin Purnell at 202-551-3454 or Anne Parker at 202-551-3611 with any other questions.

Sincerely,

Division of Corporation Finance Office of Manufacturing