

Screen Wall Memorandum

PROJECT NAME: One Canal Core & Shell
PROJECT NUMBER: 21071.00
SUBJECT: Screen wall Jogged Study Option
DATE: March 7, 2023

CC: Amanda Rapson (TRIA), Rafik Armanios (TRIA)

Matt,

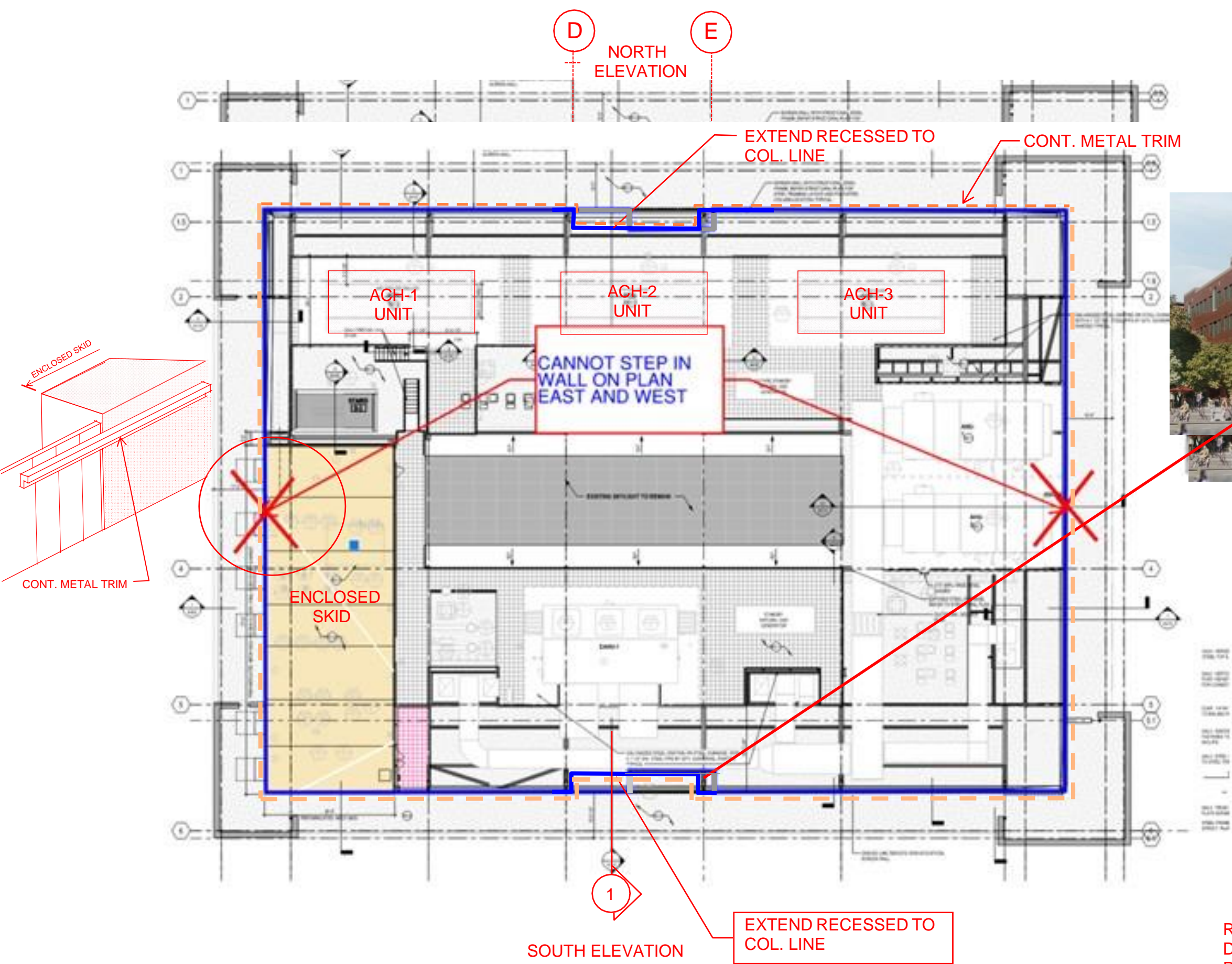
In response to Breakthrough's request dated February 2023, TRIA has conducted a study on the option of providing a jogged screen wall. As shown in the following attachments, the results of the study concluded that this option is not feasible. First, additional steel columns and horizontal members would be required for the screen wall attachment, and new structural columns will penetrate the new existing roof. Second, the jogged screen wall will impact the current ductwork layout which cannot be changed at this stage of the project. The north elevation will have similar requirements. Overall, the proposed jogged screen wall will not be feasible due to the structural reinforcements and location of mechanical ductwork.

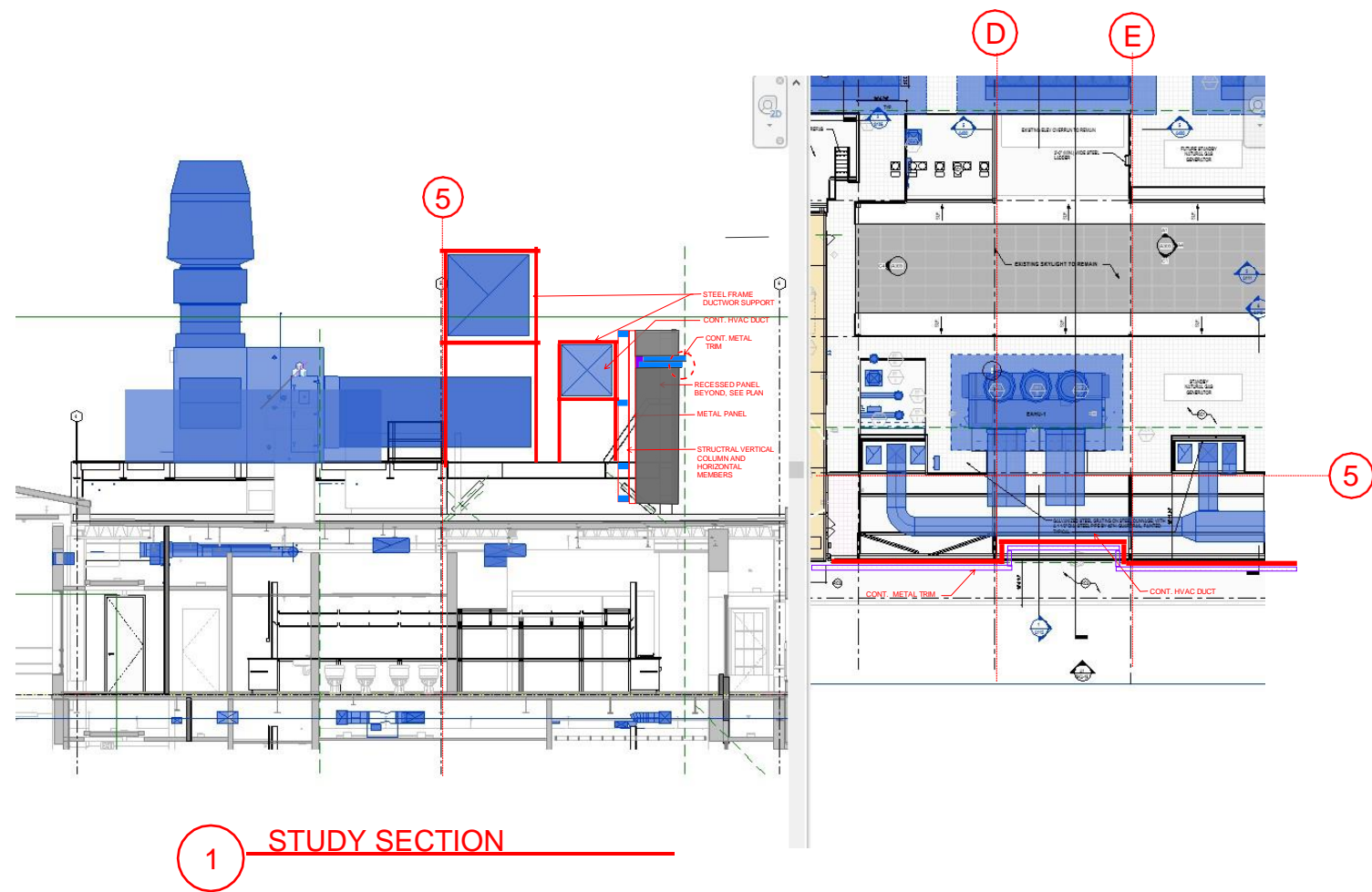
The study was based on February 06, 2023 group meeting between Breakthrough, TRIA, Thornton Tomasetti, and AHA.

TRIA and consultants team are available for further discussion and clarification of this memorandum.

Thank You,

Quoc Le





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|---------|--|--------------|----------------|
| TO | Matthew Goodman | FROM | Han Xu, PE |
| COMPANY | Breakthrough Properties | DATE | March 7, 2023 |
| RE | One Canal Park – Roof Planter Boxes and Living Green Wall and Trellis Structural Feasibility | PROJECT NO | Q21109.00 |
| CC | Quoc Le (TRIA), Nadim Rahme (TT). | PROJECT NAME | One Canal Park |

Thornton Tomasetti has been engaged to provide structural engineering services for the One Canal Park Lab Conversion Project in Cambridge, MA. The existing structure at One Canal Park, was constructed in 1986. The existing roof framing consists of 1 ½” roof deck supported by open web steel joists, steel girders, and steel columns. Existing steel columns are supported by concrete pile foundations.

Thornton Tomasetti performed a structural analysis to determine the feasibility of adding planter boxes, living green wall and trellis, or similar substantial architectural attachments to the outside of the screen wall. Our study was based on concept drawings prepared by TRIA, the project architect. The results of the analysis determined:

- The existing roof deck and the roof joists do not have adequate reserve capacity to support the additional planter boxes loads or trellis proposed by the concept design.
- The steel girders do not have adequate capacity to support the additional loads imposed by the proposed planter boxes.
- Since many existing foundations of the current design are already near capacity, material additional loads cannot be supported by the existing pile foundations.

In summary the installation of the proposed planter boxes or living green wall and trellis above the existing roof would require reinforcing to the existing roof metal deck, roof joists, roof steel girders, and the footings.

We would be happy to meet with you and review this Memorandum in more detail and answer any questions you may have.

One Canal Park – Option #2



ONE CANAL PARK FOLLOW-UP PRESENTATION

MARCH 2023



AGENDA

1. Location
2. Project Summary
3. Neighborhood Context
4. What We Heard
5. Constraints
6. Original Screen Wall
7. Revised Screen Wall

1. LOCATION

CAMBRIDGE

ONE CANAL
PARK

CAMBRIDGE STREET

MASSACHUSETTS ROUTE 28

FIRST STREET

FIRST STREET

KENDALL SQUARE

BOSTON



2. PROJECT SUMMARY

PROJECT TIMELINE:

- Building Permit Application Submitted:
December 10, 2021
- Building Permit Received:
April 4, 2022
- Construction Commenced:
May 2, 2022
- Steel for Structural Reinforcements and
Rooftop Equipment Ordered:
June 2022
- Structural Reinforcements Completed:
November 2022
- Estimated Core Shell Construction Completion:
September 2023



3. NEIGHBORHOOD CONTEXT



View from Lechmere Canal



First Street and Thorndike Way



Corner of First Street and Otis Street



Two Canal Park

One Canal Park

60 First Street

110 First Street

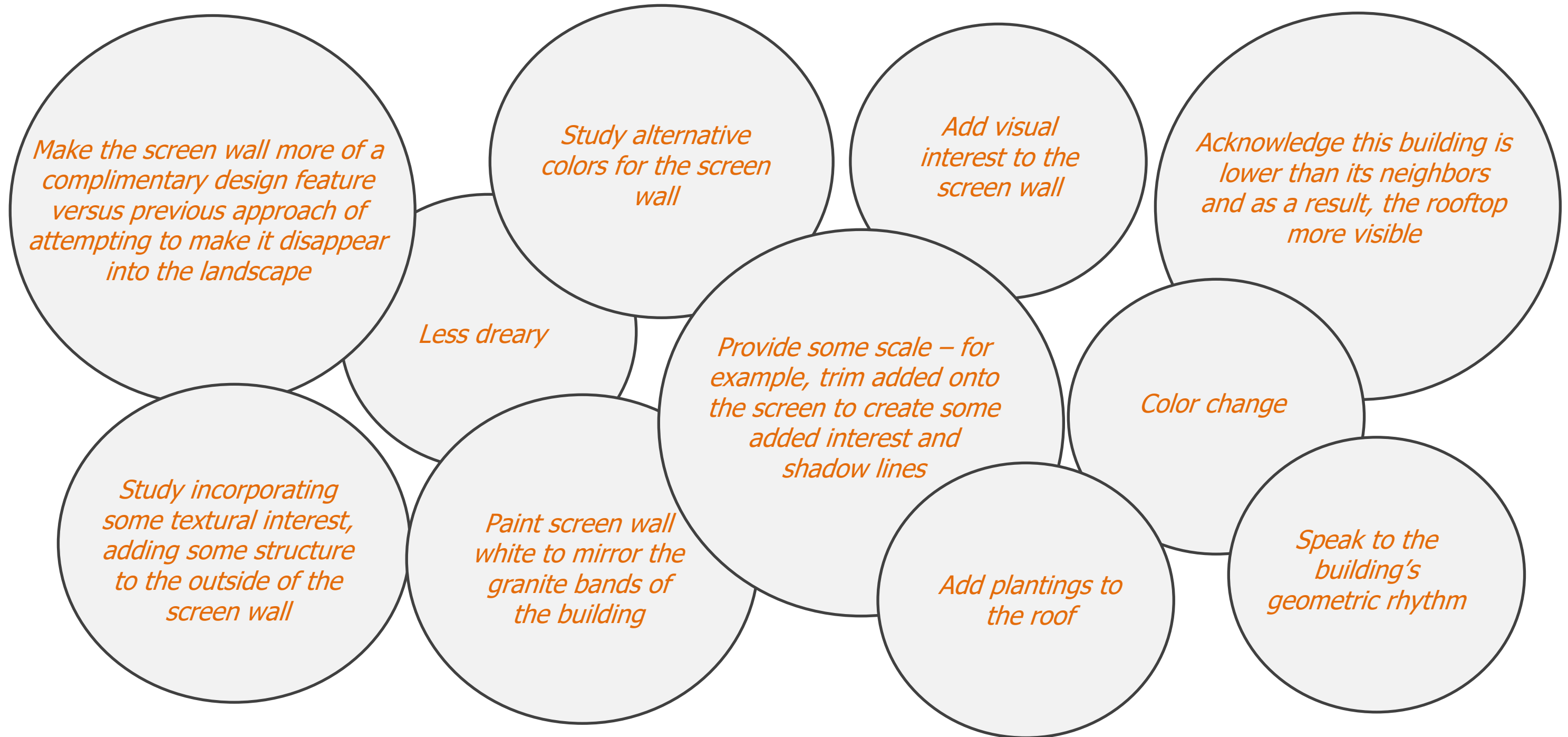
20 CambridgeSide

First Street Proposed Elevations

4. WHAT WE HEARD

The Team has studied creative solutions to incorporate the thoughtful feedback and ideas that were shared by the Planning Board during the last Project Update on December 6. Takeaways from that meeting are summarized below.

KEY TAKEAWAYS FROM THE DECEMBER 6 DISCUSSION



5. CONSTRAINTS

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Additionally, TRIA, Thornton Tomasetti, and AHA (MEP/FP engineer), studied the possibility of jogging the screen wall. Similar to the above conclusion, a jogged screen wall is not possible due to the structural constraints as well as the location of mechanical ductwork.

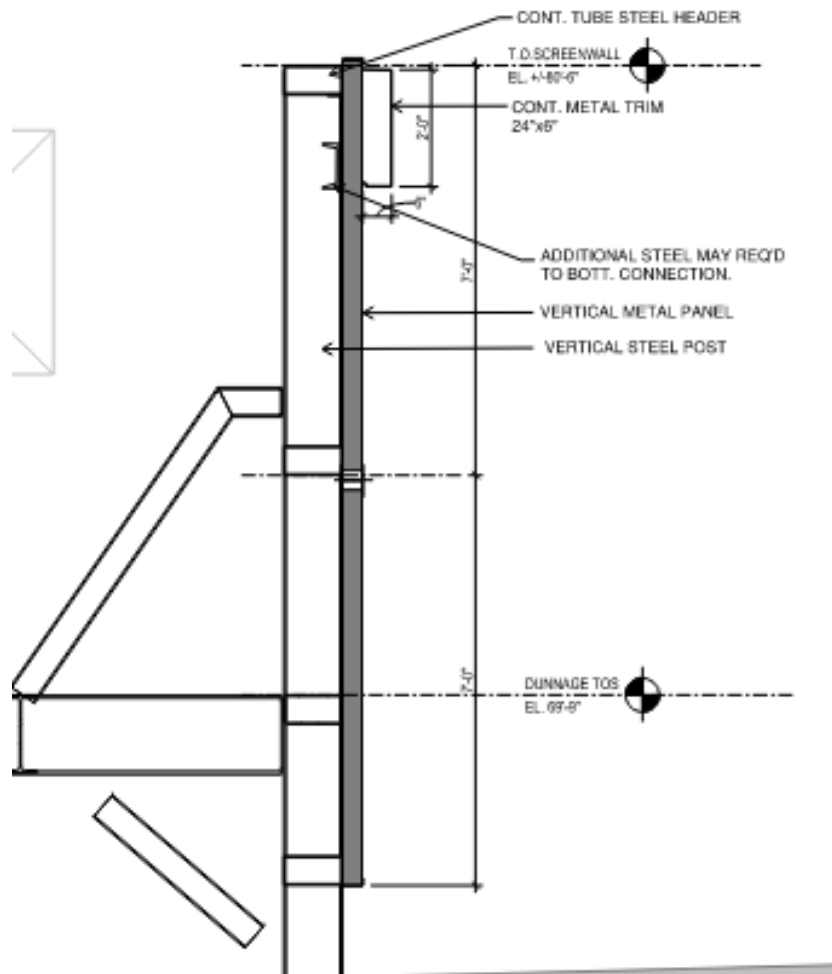
6. ORIGINAL SCREEN WALL



7. REVISED SCREEN WALL – Recommended Alternative



7. REVISED SCREEN WALL – Recommended Alternative



Color to match granite inlay, box top cornice to mirror the building's geometry and create added interest/shadow lines.



Added plantings to exterior balconies along Lechmere Canal Park.

7. REVISED SCREEN WALL – Other Options Studied



The Team also studied a teal hue to speak to the building's skylight, window tint, and framing. Ultimately, the Team felt this colorway is likely to age faster, look dated, and create too much of a focal point.

7. REVISED SCREEN WALL – Other Options Studied



Alternative cornice to highlight building's geometry and add visual interest. Ultimately, the Team felt this design didn't resonate as well with the clean lines of the building as the recommended option did.

THANK YOU!

Q&A