



MEMORANDUM

January 17, 2024

Michele Littlefield
Cube 3
160 State Street, Floor 6
Boston, MA 02209

**RE: Novo Riverside Commons – Site Structures, Concord, MA
Conceptual Structural Narrative
H+O Project #24-007**

Dear Michele,

H+O Structural Engineering (H+O) will be completing professional structural engineering services for two site structures located at 300 Baker Avenue in Concord, MA as part of the Novo Riverside Commons development. The two structures include an elevated parking deck and an elevated trail deck as shown in Figure 1.

This memo is intended to accompany the Civil Notice of Intent Plans prepared by Beals and Thomas, Inc. for review by the Concord Natural Resources Commission. This memo is noting preliminary design only and should not be used for construction. A final set of plans will be issued for construction.

To prepare this memo, H+O referenced Beals and Thomas plans dated December 12, 2023 and a Geotechnical report prepared by Nobis Group dated July 20, 2022 for the Assabet River Crossing +/- 130 FT south of Point A-1 in Figure 1. An updated soil report will be required for the final design.

PARKING STRUCTURE

The 'Proposed Parking Deck' on civil drawing C2.1 is a 1,200 SF exterior use single-story parking structure to be designed by H+O. The structure and supporting foundation will be designed for gravity and lateral loads as required per the 2015 International Building Code (IBC) as amended by Massachusetts State Building Code (780 CMR 9th Edition).

We anticipate the parking structure to consist of structural steel moment frames supporting precast concrete planks. Along the perimeter of the parking structure, a structural steel guardrail will be connected to structural framing as required. See Figure 2 for a plan markup and Figure 3 for a section markup of the elevated deck.

Foundations will consist of concrete piers supported by pipe piles or drilled concrete piers bearing on bedrock as recommended by the geotechnical report referenced above. The foundation will be coordinated with the geometry and elevation of the proposed adjacent storm water system (designed by others). Designs for the storm water system have not yet been provided for H+O's review and further coordination is required to complete the foundation design.

ELEVATED TRAIL DECK

The elevated trail deck is approximately 225 feet long and elevated over the flood plain. The 18'-0" wide deck will be designed for pedestrian and light vehicle (maintenance) traffic only. The trail deck will consist of wood framing supported on drilled concrete piers. See Figure 4 and Figure 5 for the preliminary trail deck design.



Should you have any questions, please don't hesitate to contact us.



Megan Denison, P.E.
Project Manager



Jeremiah O'Neill, P.E.
Principal



APPENDIX A: FIGURES

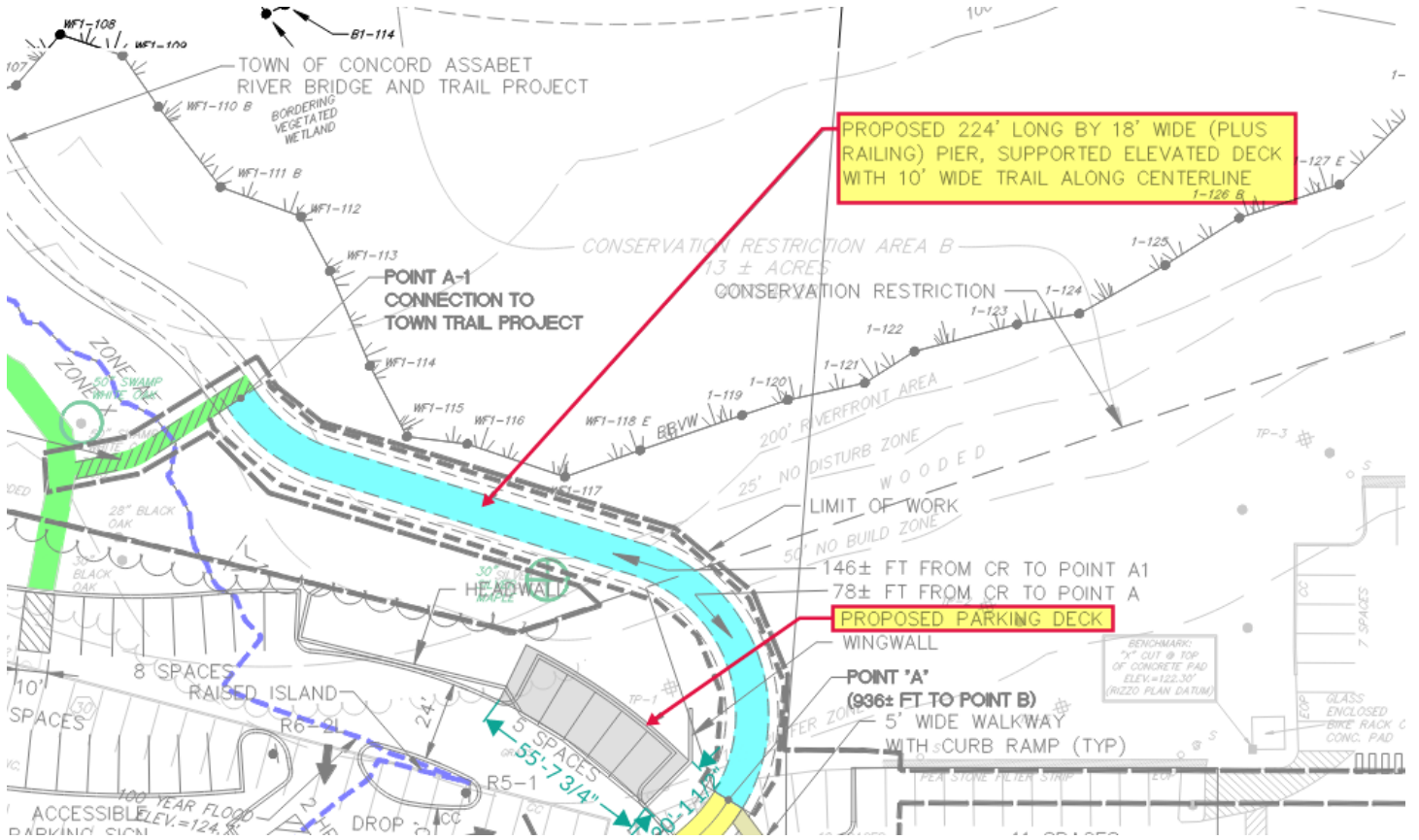


Figure 1 - Site structures included in SOW as shown on Civil plan C2.1 dated 12/18/2023



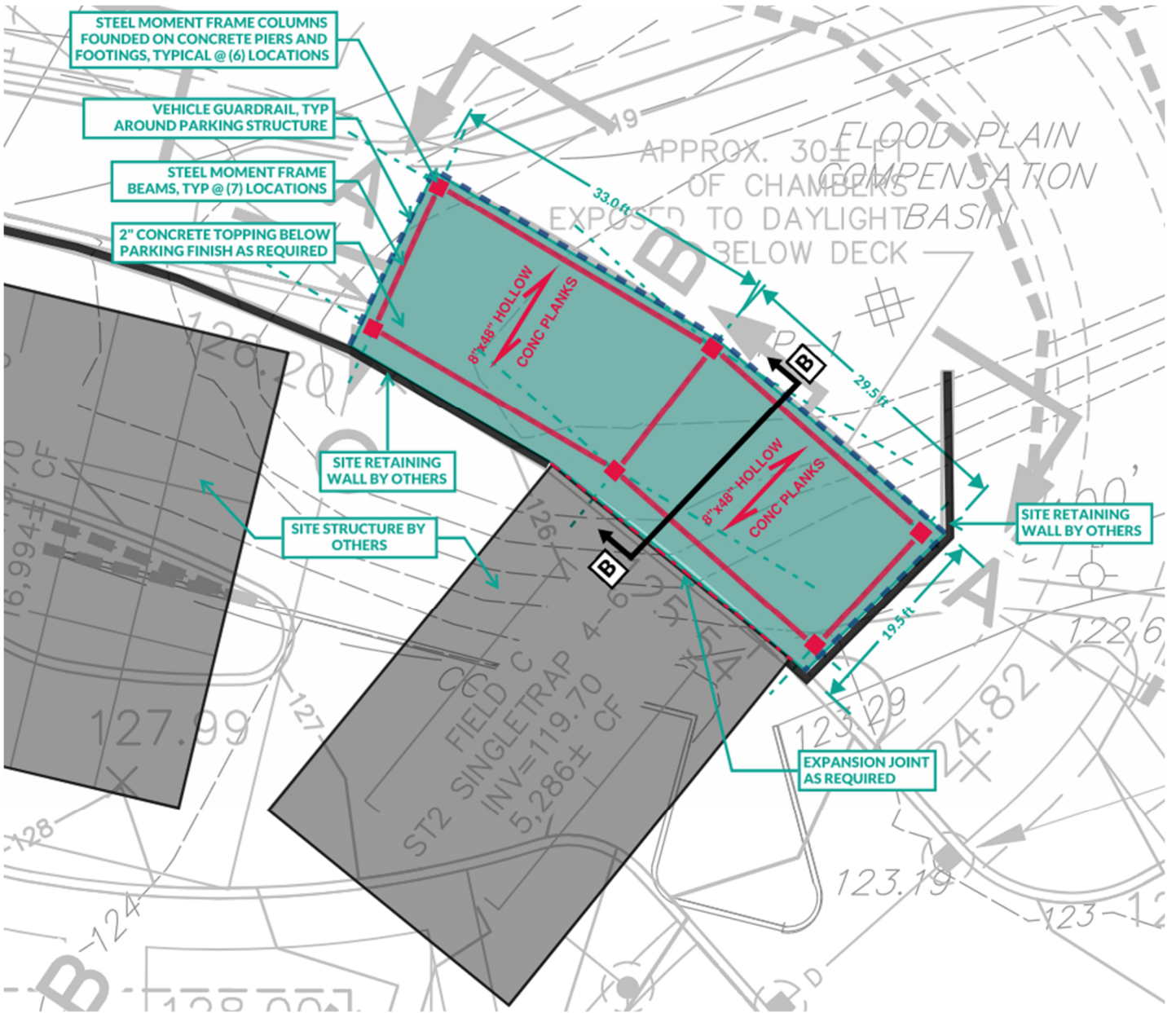


Figure 2: Proposed Parking Deck Plan



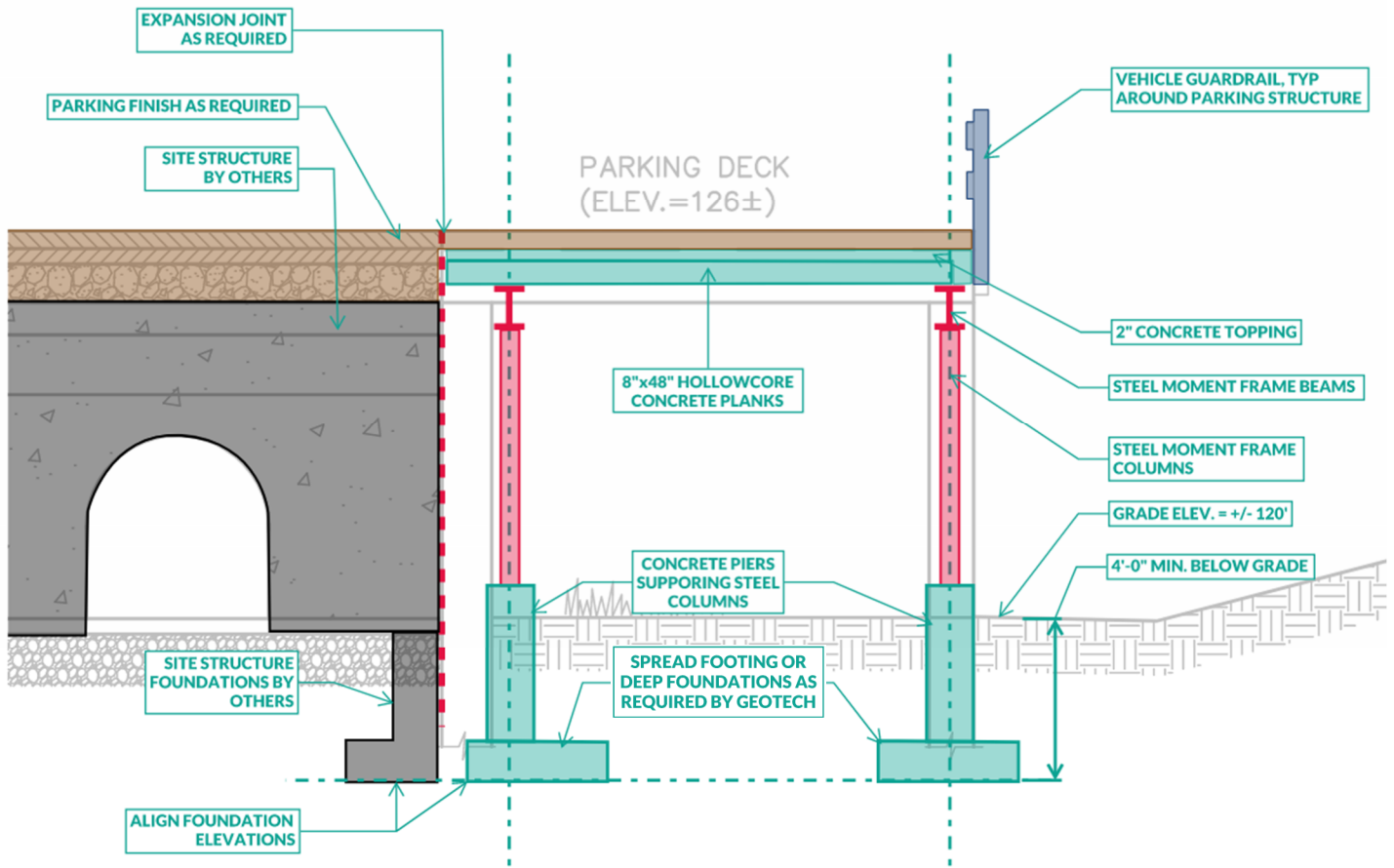


Figure 3: Parking Structure Schematic Section B-B



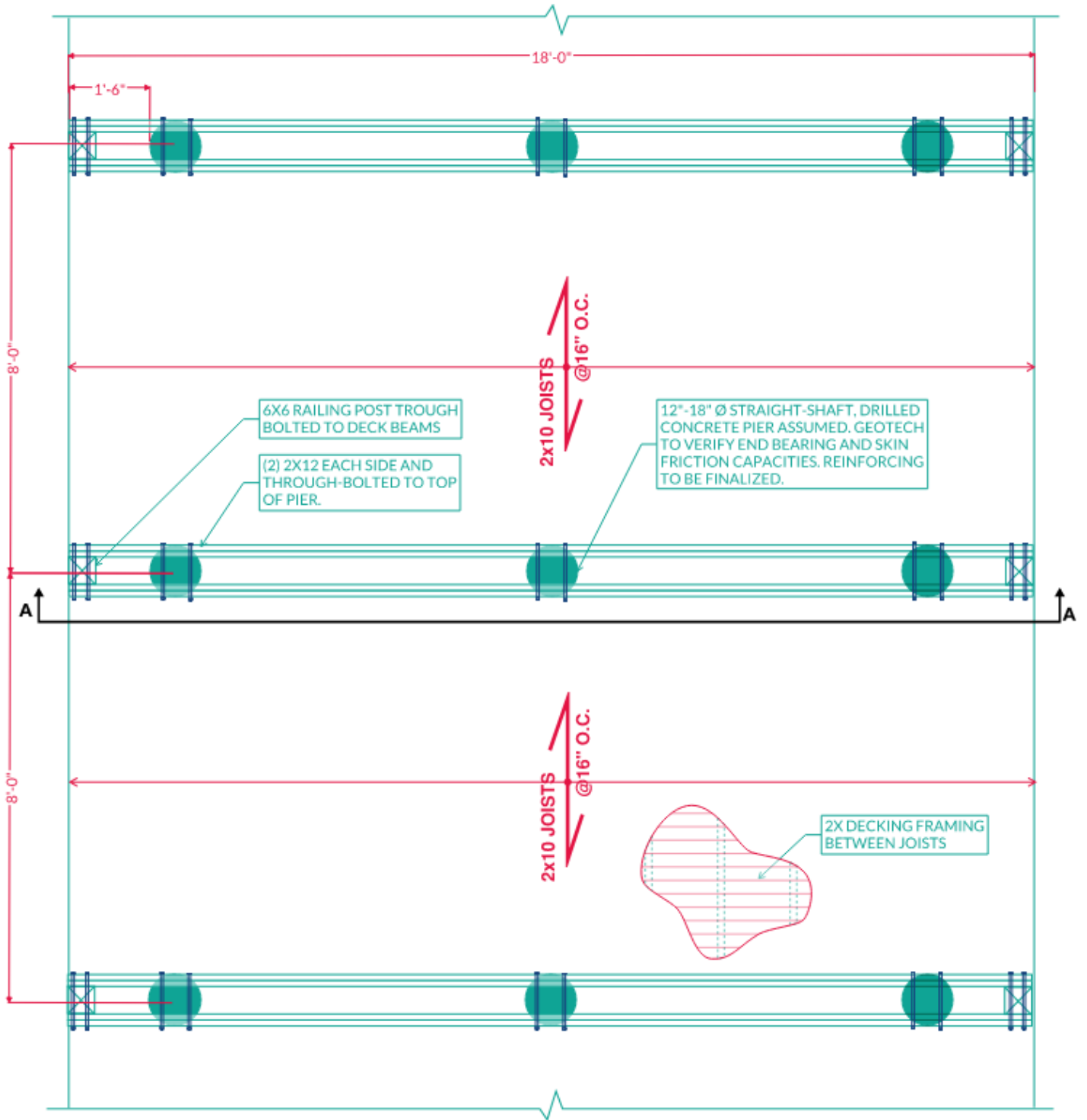


Figure 4 - Proposed elevated trail deck plan



NOTES:

1. FINAL GEOTECH REPORT REQUIRED TO FINALIZE FOUNDATION DESIGN.
2. DRILLED FOOTING EXCAVATIONS SHOULD BE FILLED WITH CONCRETE IMMEDIATELY AFTER THE COMPLETION OF THE DRILLING AND INSPECTING OPERATIONS.
3. NOT MORE THAN 1 INCH OF WATER SHOULD BE ALLOWED OVER THE BOTTOM OF THE DRILLED FOOTING EXCAVATION AT THE TIME OF CONCRETE PLACEMENT.
4. CASING MAY BE REQUIRED WHERE, IN THE OPINION OF THE GEOTECHNICAL ENGINEER, CAVING MAY BE A CONCERN, GROUND WATER IS ENCOUNTERED, OR AS NECESSARY TO COMPLY WITH REFERENCED CODE.
5. ALL EXPOSED HARDWARE TO BE GALVANIZED, OR STAINLESS STEEL. SEE MANUF. FOR CORROSION PROTECTION REQUIREMENTS.
6. ALL WOOD TO BE PRESSURE TREATED SPF #1/#2 OR BETTER.
7. ARCH TO APPROVE RAILING DESIGN

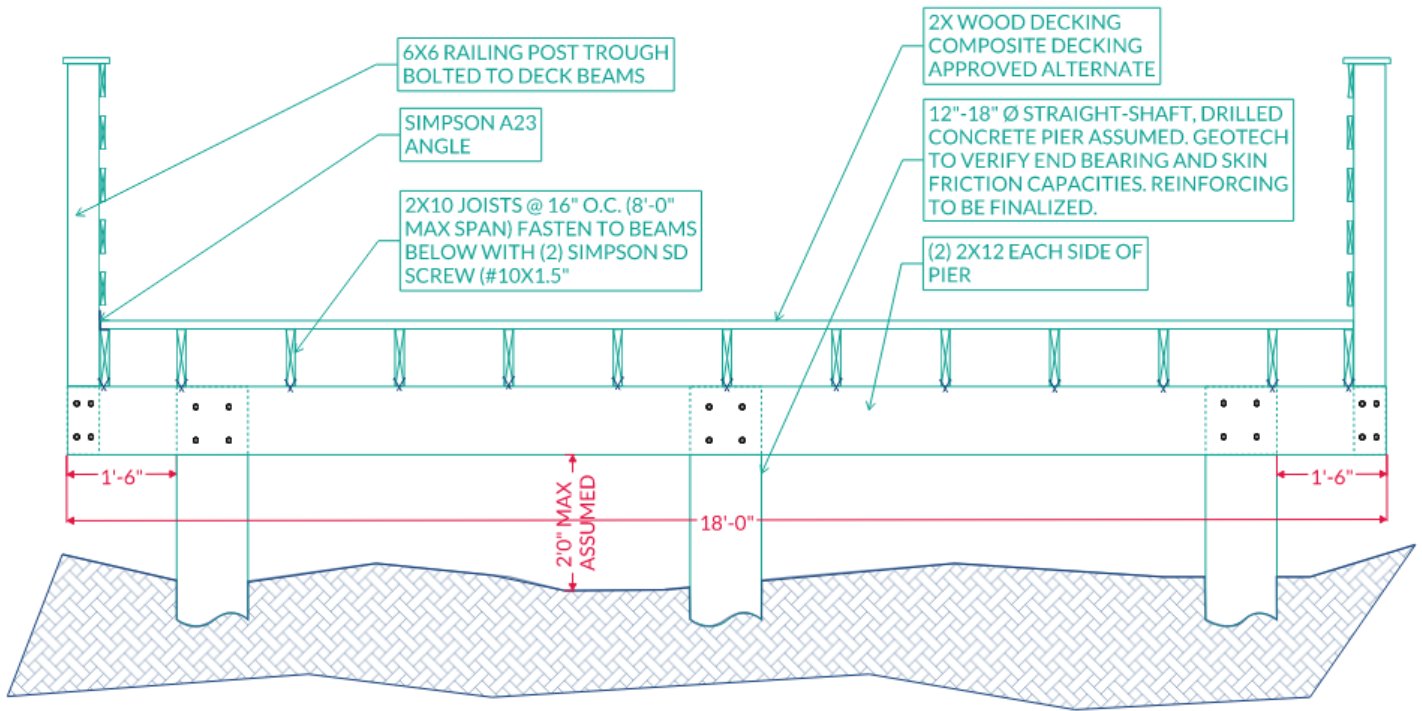


Figure 5 - Section A-A through elevated trail deck

