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## Covenant Christian Academy - Civil Design

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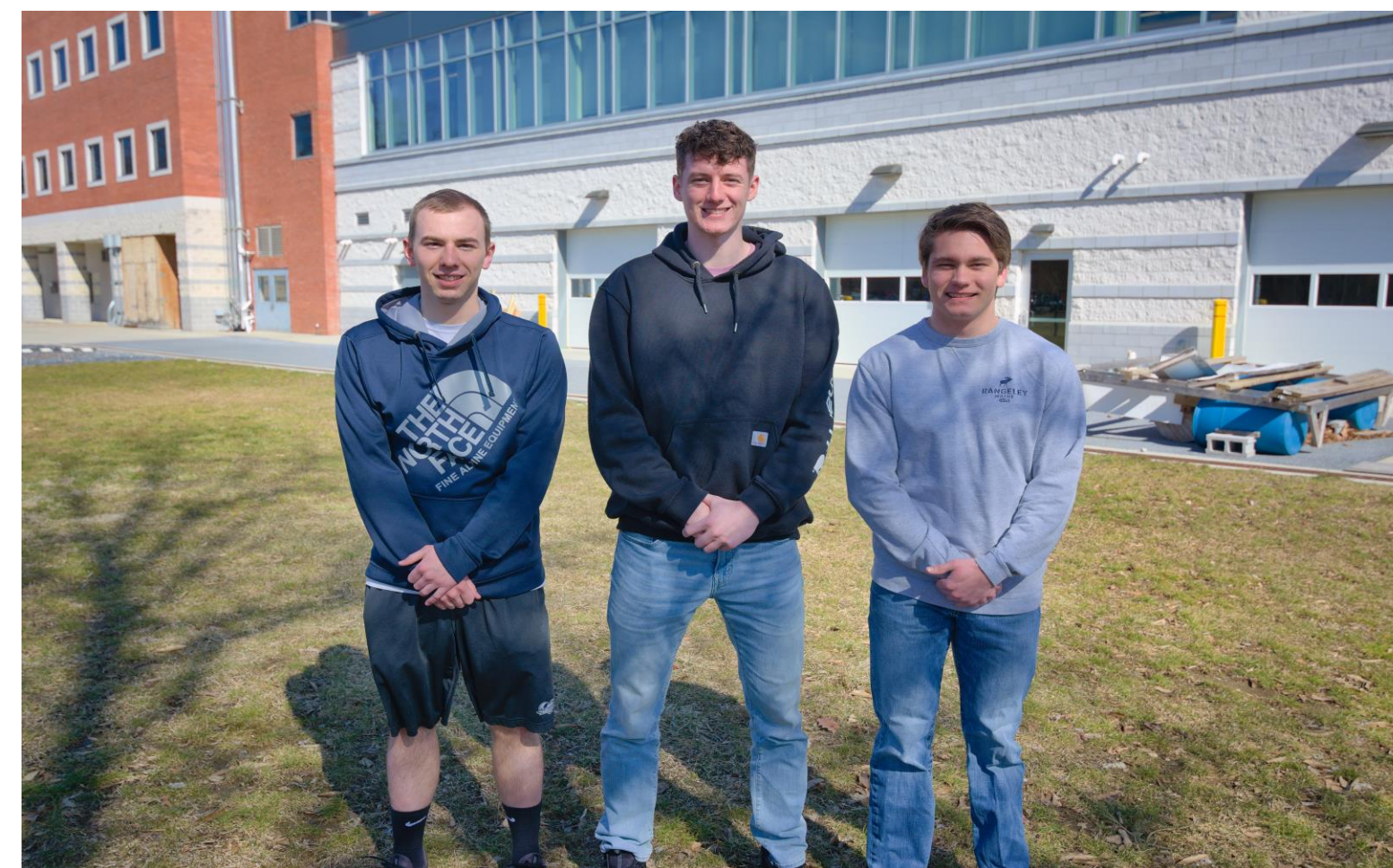
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# Covenant Christian Academy - Civil Design

Project Members: Justin Blest (SPM), Christian Cornelius, Corey Englehart

## Introduction

The CCA Civil design team was asked to improve the safety and usability of the rear lot at CCA through two objectives. The first goal was to redesign the rear parking lot to create a grass recreation area while integrating the remaining paved area into an improved student drop-off/turn-around. The second goal was to design a portico/covered walkway structure that connects the rear entrance of the main building to the entrance of the Fine Arts Building.



## Client

The Covenant Christian Academy Civil Design team has partnered with Covenant Christian Academy (CCA) in Harrisburg, Pennsylvania. The team worked with David Sonju, Headmaster at CCA and client representative for the school.

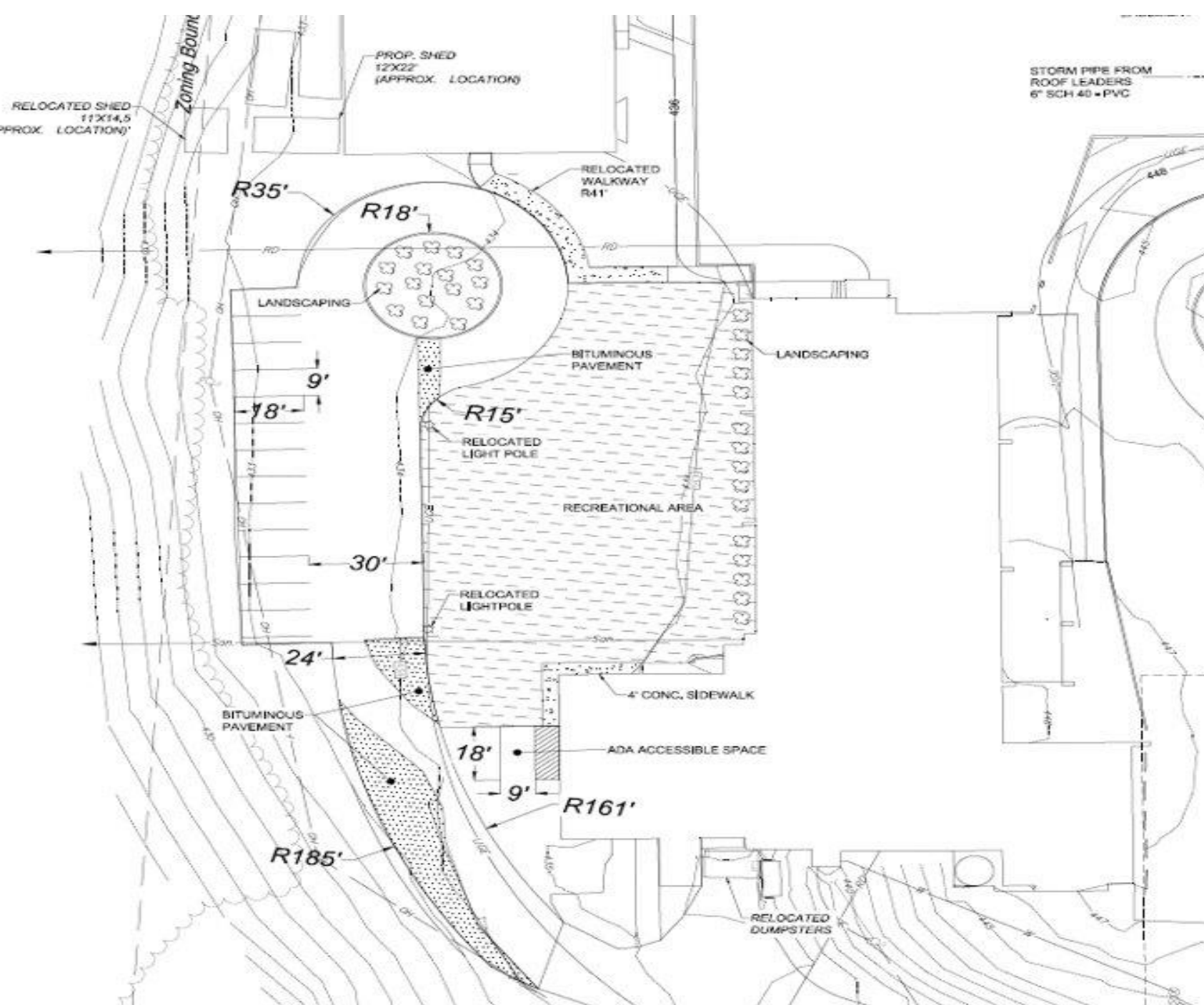


## Site Development

Existing Conditions and Proposed Features



Final Design



## Results

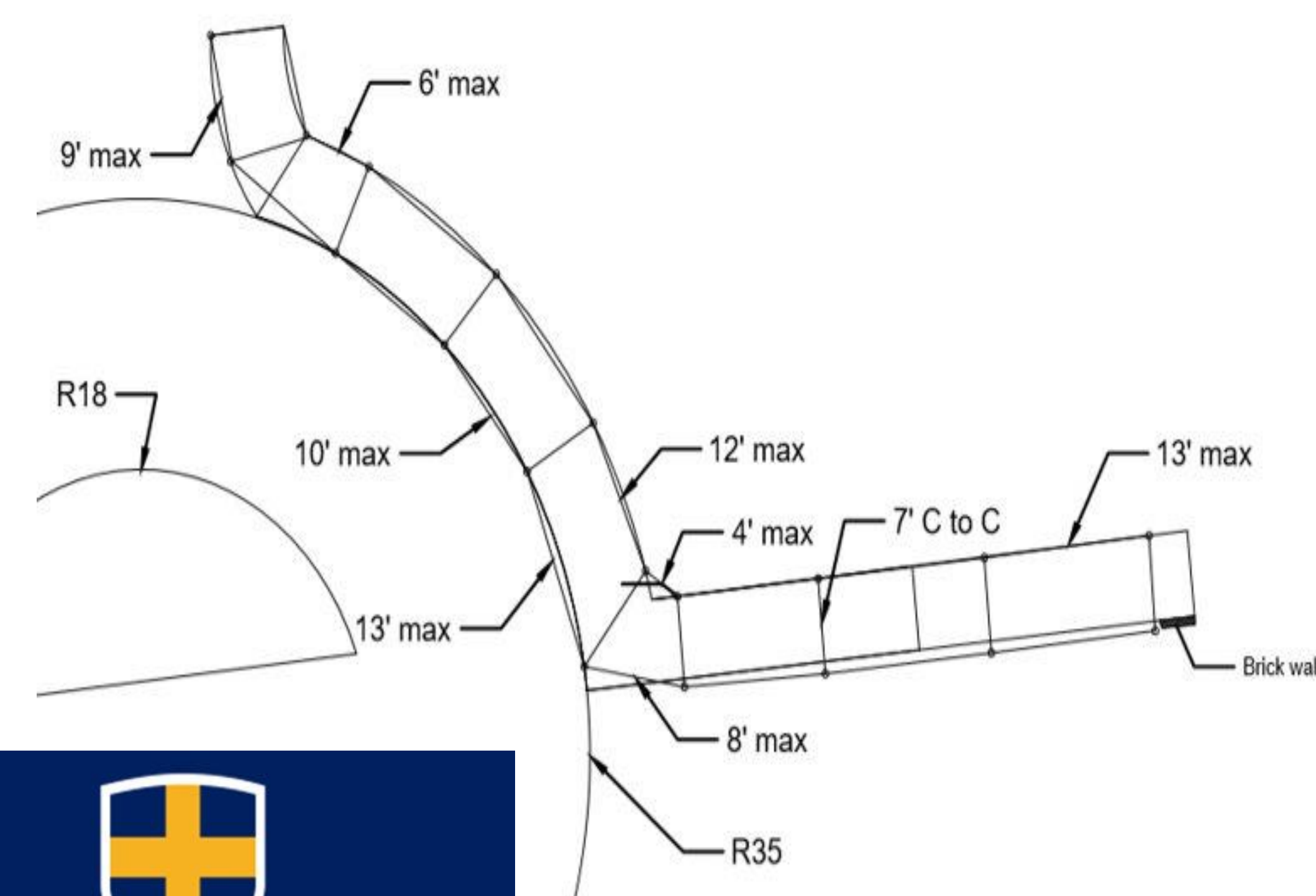
- The completed site design includes specifications for grading, resurfacing the lot in disrepair, a reconstructed turnaround circle, a reconstructed entrance drive, and runoff calculations.
- The covered walkway design includes a fully analyzed frame design, specifications for connection details, and lateral bracing. Future design work will need to be conducted to verify and refine our design before construction.

## Conclusions

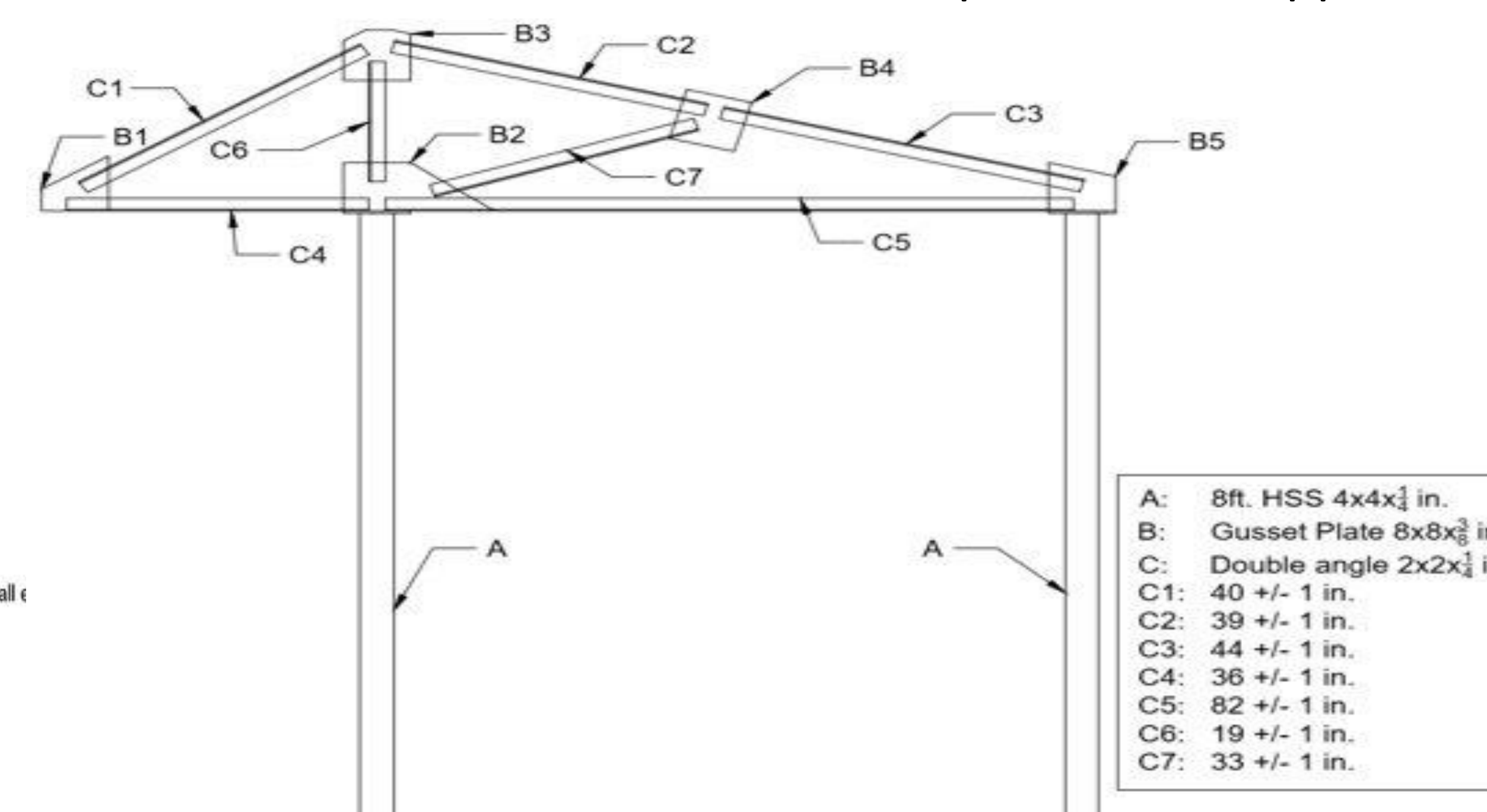
The team has completed final design drawings and calculations for the site development and portico structure. The team will provide its design work to CCA and their design consultant, H. Edward Black and Associates, Ltd., to finalize the required construction drawings and obtain professional approvals to build the project.

## Covered Walkway Structure

Column and Path Location Drawing



Portico Frame Design



## Acknowledgements

- Prof. Scott Heisey (PM)  
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 H. Edward Black & Associates, Ltd.  
 Betsy Davidson  
 Gary Garbacik