UW – Madison Civil Engineering Capstone Class

Stoughton RDA Introduction – Hydro Power Station

Civil Engineering Capstone Class Introduction

Thank you for this chance to talk with the Stoughton Redevelopment Authority!

Instructors

- Jan Kucher, P.E. and Derek Hungness, P.E. Instructors
- Each have 35 years + experience as consulting engineers

Class

- Goal is to assist transition from academia to the working world
- All Civil Engineering students take the class - typically in last semester
- 60 – 75 students / semester
- 20 - 30 professional engineer / architect mentors
- 30 presentation judges

Capstone Overview

- Provide an understanding of the design process
- A Project Based Learning course, immerses students in a "real-world" situation where they work on a major open-ended design challenge in multi-disciplinary teams
- Mentors play a key role in this cross-disciplinary learning environment
- Provide a real-world design challenge for student teams
- Develop the ability to work effectively and respectfully within diverse cross-curricular teams
- Develop appropriate engineering deliverables interacting with their clients

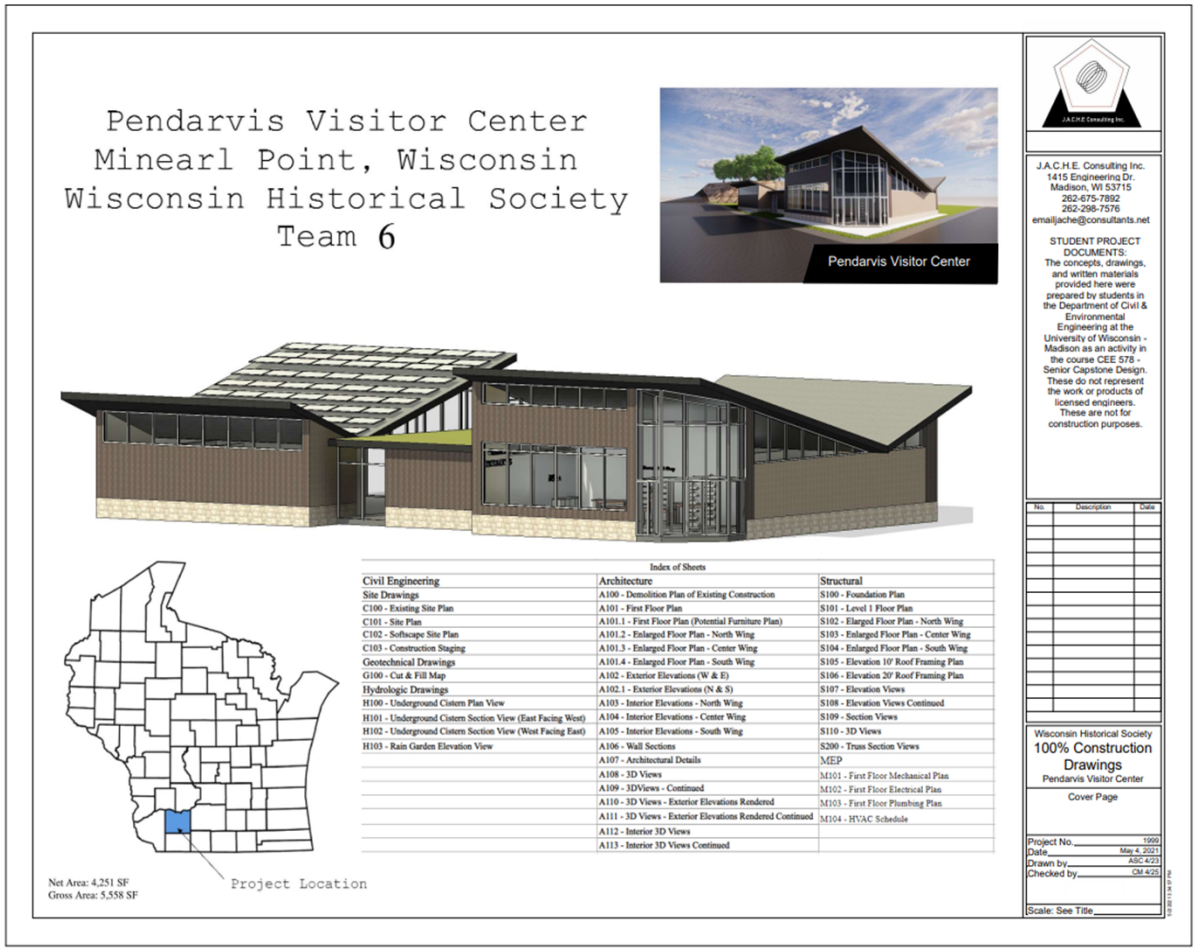
Capstone Classroom

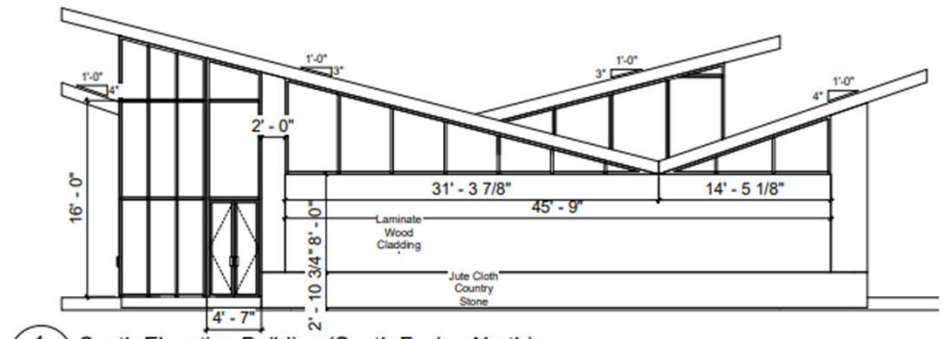
Capstone Class

How It Works

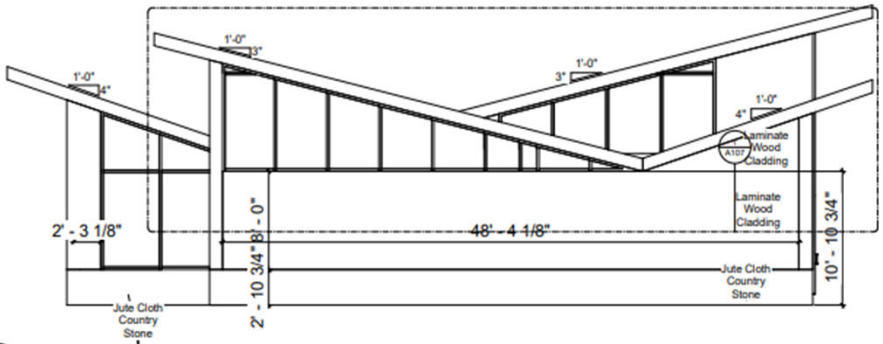
- Instructors locate real projects for 5-person student teams
- There is no cost to a client
- Each team has 2 professional engineers or architects as mentors
- A proposal is prepared and presented by the teams
- Teams look at alternatives and prepare a preliminary engineering report (feasibility study) with a presentation
- Next plans and specifications are prepared – with presentation
- The value as a conceptual study is in the range of $ 10,000 to $ 15,000
- Project outputs are not constructable

Examples of Capstone Project Drawings





1 A102.1 South Elevation Building (South Facing North)
3/8" = 1'-0"



2 A102.1 North Elevation Building (North Facing South)
3/8" = 1'-0"

J.A.C.H.E. Consulting Inc.
1415 Engineering Dr.
Madison, WI 53715
262-675-7892
262-298-7576
email@jache@consultants.net

STUDENT PROJECT DOCUMENTS:
The concepts, drawings, and written materials provided here were prepared by students in the Department of Civil & Environmental Engineering at the University of Wisconsin - Madison as an activity in the course CEE 578 - Senior Capstone Design. These do not represent the work or products of licensed engineers. These are not for construction purposes.

No.	Description	Date

Wisconsin Historical Society

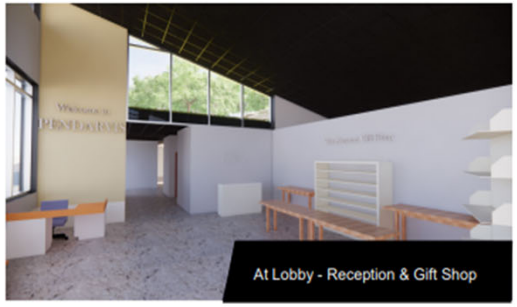
Pendarvis Visitor Center

Exterior Elevations (N & S)

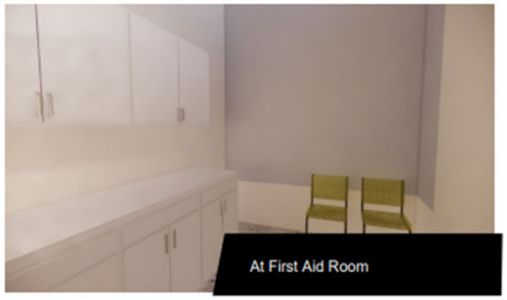
Project No. 1999
Date May 4, 2021
Drawn by ASC 4/23
Checked by CM 4/25

A102.1

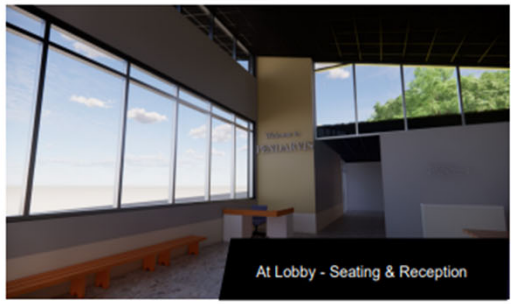
Scale: See Title



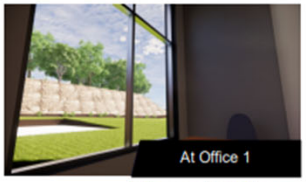
At Lobby - Reception & Gift Shop



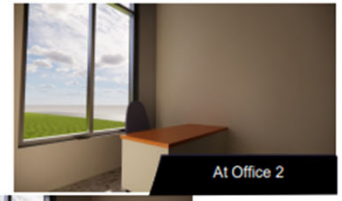
At First Aid Room



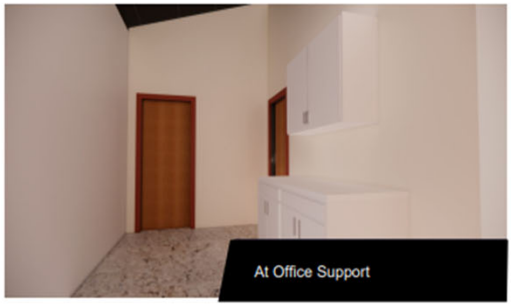
At Lobby - Seating & Reception



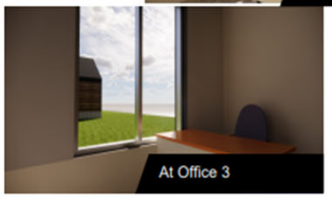
At Office 1



At Office 2



At Office Support



At Office 3

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Pendarvis Visitor Center

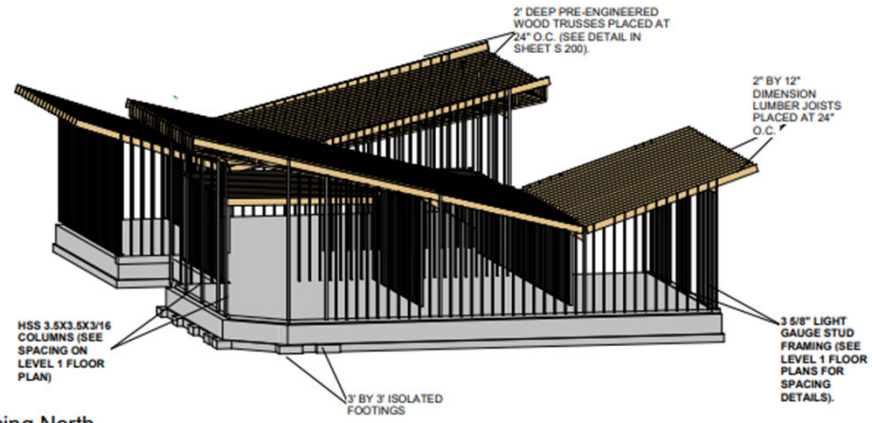
Interior 3D Views

Project No. 1999
Date May 4, 2021
Drawn by ASC 4/23
Checked by CM 4/25

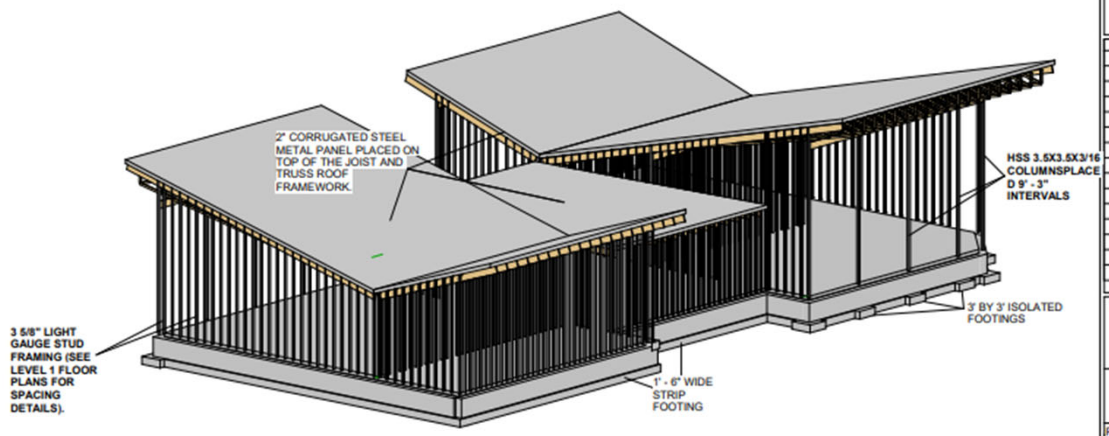
A112

Scale: See Title

College of Engineering
UNIVERSITY OF WISCONSIN–MADISON



1 South Facing North



2 West Facing East

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Pendarvis Visitor Center

3D Views

Project 1999
Number May 04, 2021
Draw JTC 4/24
Check Checker
ed By S 110
Scale: See Title

National Council of Examiners for Engineering and Surveyors (NCEES) Award

November 10, 2022

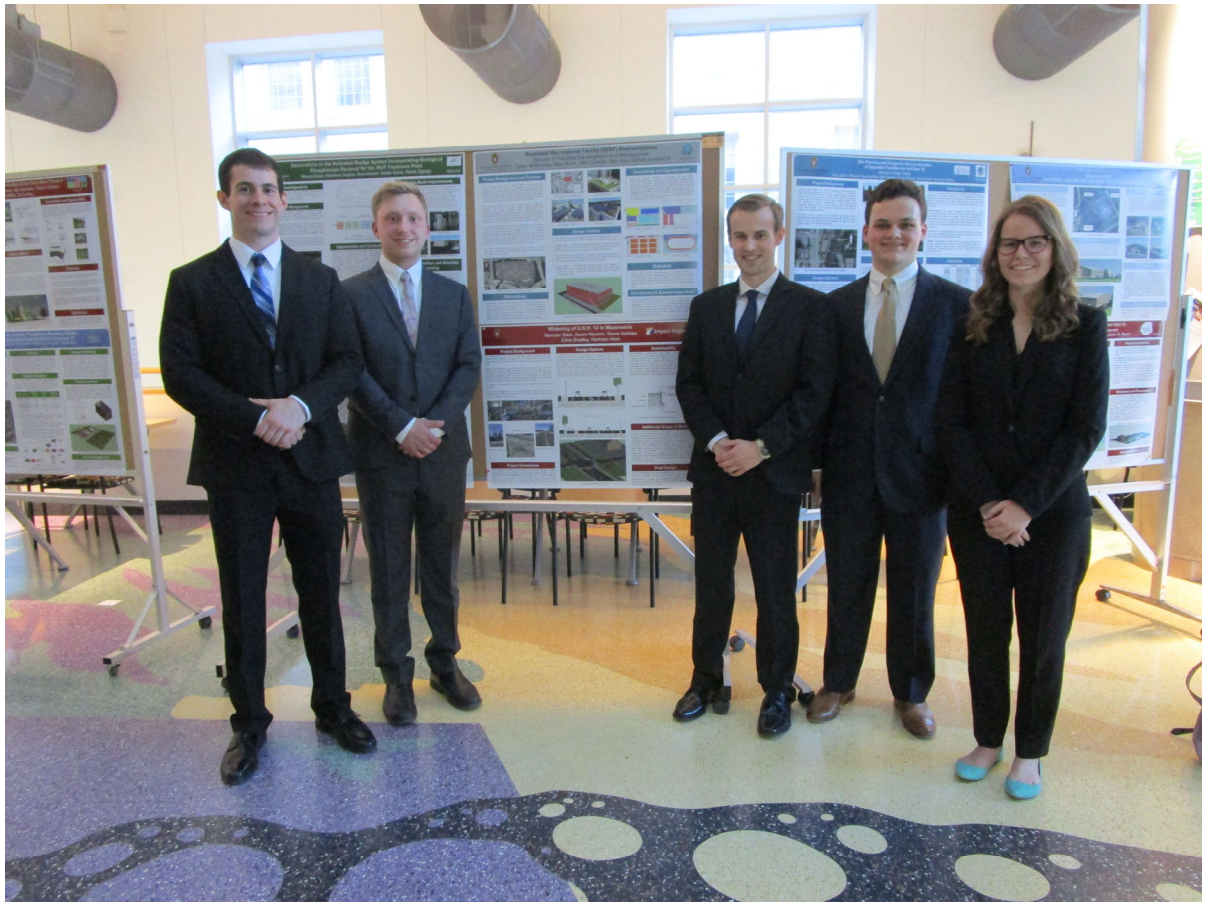
Senior Capstone Design Course for Civil Engineers Wins 6th NCEES Award

Written By: Amanda Thuss

Departments:
Civil & Environmental Engineering

Categories:
Awards | Students | Undergraduate

Previous Clients

- Clean Lakes Alliance
- Taliesin
- WDOT
- Municipalities
- Developers

Capstone