

# A SUNSHINE STUDIO

## Interaction CONCEPT:

Shared spaces foster communication and cooperation between students, professionals/educators, and communities (clients). By integrating multiple functions, technologies, and interactions between team members, educators, and clients, a shared space can be used for collaboration among different levels of students in the service-learning model. Also these spaces can provide a more private space to support individual research. These physical features will promote a space for students to engage in higher order thinking skills; communication; problem solving and decision making; and the linkage of course material to outside settings (Cantor, 1997; Eylar & Giles, 1999; Hamner, 2002). This shared learning space is functional and flexible in order to promote comfort, safety, and health for the student who seeks to achieve their interior design learning goals. The space includes universal design to provide access to everybody, thereby meeting ADA standards.

## Sustainability CONCEPT:

Sunflowers symbolize sunshine and nature, which inspired the brown and yellow colors in the space. The concept also includes sustainability, providing an eco-friendly learning space. Energy savings are promoted by using abundant daylight and an energy efficient artificial light control system. Research guided the choices of both recycled and sustainable materials (Ljungberg, 2007). Local materials, with the added benefit of promoting local businesses and job opportunities (Costanza, 1992), were chosen. The cordwood floor from local dead trees, primarily killed by pine bark beetles, will save on embodied energy and provide a sustainable alternative to a typical wood floor. Other furniture and materials selected meet sustainability standards as noted in the annotations section.

## Innovation CONCEPT:

Technology is a critical tool in higher education used to solve design problems in a way that may depart from traditional learning methods. The new technology Cave Automatic Virtual Environment (CAVE) provides a virtual 3-D environment, which gives clients and students a new way to experience a space. In a typical CAVE system multiple projectors are directed at walls in a way that creates a virtual environment, but LCD panels can also be used (Limiou, Roberts & Papadopoulos, 2008). CAVE is used primarily in the engineering and energy sectors, but is emerging as a technology in interior design and architecture.

### References

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Eylar, J., & Giles Jr, D. E. (1999). *Where's the Learning in Service-Learning? Jossey-Bass Higher and Adult Education Series*. Jossey-Bass, Inc., 350 Sansome St., San Francisco, CA 94104.

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Costanza, R. (1992). *Ecological economics: the science and management of sustainability*. Columbia University Press.

Ljungberg, L. Y. (2007). Materials selection and design for development of sustainable products. *Materials & Design*, 28(2), 466-479.

Limiou, M., Roberts, D., & Papadopoulos, N. (2008). Full immersive virtual environment CAVE TM in chemistry education. *Computers & Education*, 51(2), 584-593.



Image Credit

[https://en.wikipedia.org/wiki/Cave\\_automatic\\_virtual\\_environment#/media/File:CAVE\\_Crayoland.jpg](https://en.wikipedia.org/wiki/Cave_automatic_virtual_environment#/media/File:CAVE_Crayoland.jpg)



First floor reception area

## Second floor main area



## Local analysis:

Located in Fort Collins, Colorado, Colorado State University (CSU) is the university chosen to house this vertical studio. The Department of Design and Merchandising provides a four-year bachelor degree in Interior Design and a two-year master's degree in Design and Merchandising (Leigh et al, 2013). Fort Collins is a midsize college city in the Rocky Mountain region, with an abundance of local wood materials and historic buildings with renovation potential.

Local residents that value the sustainable practice of renovating a property, rather than building new, are the main community for this project. According to U.S. Census Data (2015), the median value of owner-occupied housing units was \$247,800 (2009 to 2013 data) while median household income was \$53,780 during that same time period. These values show that due to the relative expense of single family homes compared to median income, renovation of existing properties is an economically attractive option.

Fort Collins provides a great climate and quality of life. In fact, it was voted "America's Most Satisfied City" by Time magazine last year (Nicks, 2014). A highly skilled labor force also contributes to a growing population and job opportunities, thereby contributing to a strong real estate market with corresponding design opportunities.

### References

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Nicks, D. (April 11, 2014). Fort Collins, Colorado Is America's most satisfied city [Electronic version]. *Time Magazine*.

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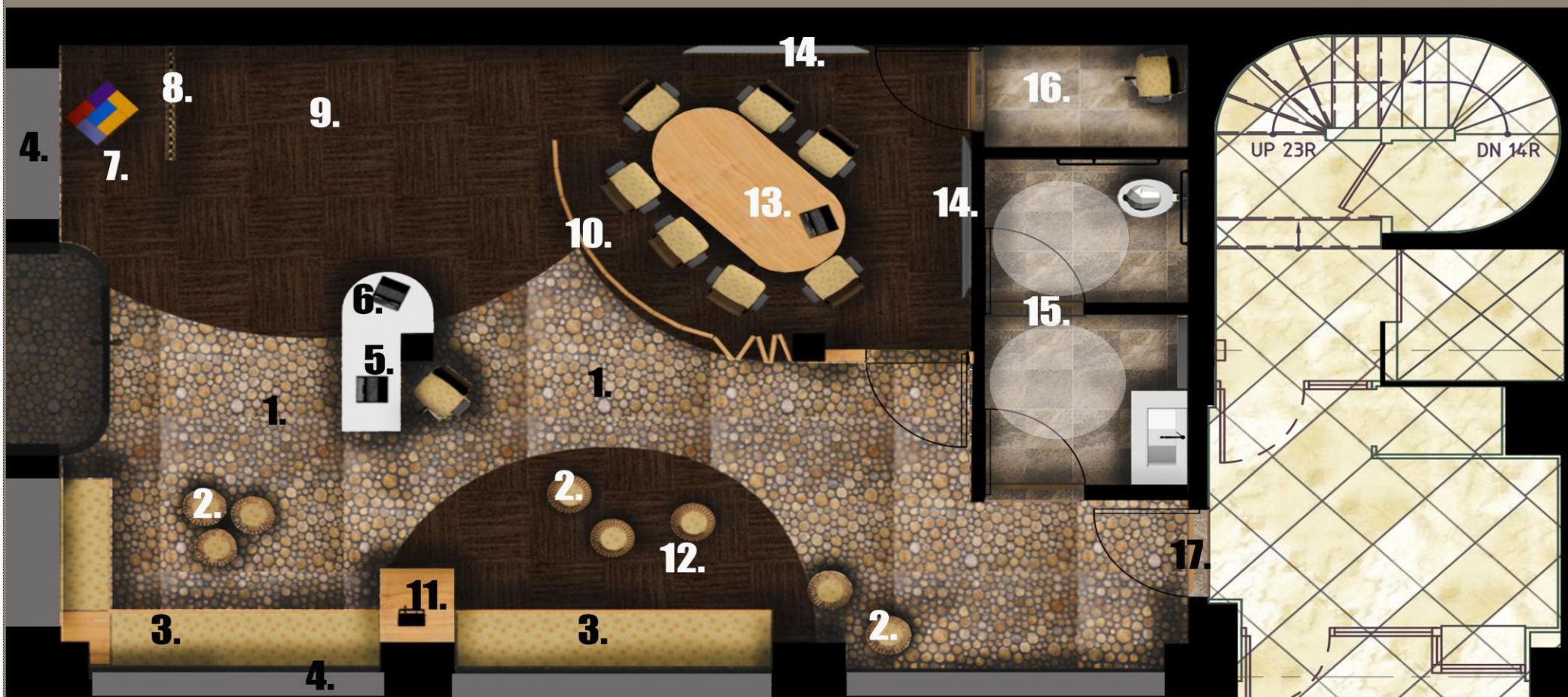
Second floor student resource area



# Annotations

## First Floor

1. Easily accessible community reception area. The cordwood floor guides traffic. The material is from local pine-beetle kill, which meets the sustainability standard
2. Flexible furniture can be easily moved and arranged
3. Waiting area built-in bench provides more seats for visitors
4. Large window provides full sunshine
5. Desk area for part-time staff
6. The other part of desk houses CAVE equipment with storage underneath
7. Child play area with a display area to make furniture and arrange finishes
8. Drapery as partition to separate the children's play area and the space for the walk-in 3-D model (Cave Automatic Virtual Environment)
9. CAVE area that can be used to introduce designs for clients, but can also be used for student instruction
10. Wood (locally sourced) movable wall to separate an area for formal design presentation and meetings when privacy is needed. When open, the space can be used for design charrettes.
11. Coffee service cabinet with storage underneath separates two areas
12. Informal meeting area for 5-7 people
13. Conference table
14. Two LCD panels provide flexibility for presentations
15. Accessible family restroom with diaper changing table. Toilets are low flow fixtures.
16. Storage room holds extra tables and chairs for maximum flexibility in using open areas
17. Fire door provides alternate entrance and better access to studio floor



*First floor plan*

## Second Floor

18. Student resource and meeting area with movable chairs made accessible with minimal rearrangement.
19. Interior design magazine cabinet
20. Workspace for rendering or assembly
21. Printer station
- 22--24. Group area for 5 students
25. Temporary group meeting area. Steelcase Nose chair with personal table can be easily arranged to support writing and digital function
26. Projector and screen for traditional lecture methods when appropriate
27. Flexible area where chairs can be moved for listening to lectures
28. Private faculty office



*Second floor plan*



**First floor children's play area and CAVE center**

## FF&E

29. Mohawk Group carpet – 100% recyclable, with Health Product Declarations (HPDs) and Environmental Product Declarations (EPDS) labels, and meets the NSF 140 standard
30. DesignTex 100% recyclable upholstery can be recycled endlessly without loss in quality or purity
31. 3-form eco-resin
32. Wausau Tile – Terrazzo tile from recycled glass; 100% post-consumer/post- industrial recycled content and accounts for approximately 33% of whole product's weight.
33. Hand-made cordwood floor. Wood is from local beetle-kill pine. Titebond GREENchoice adhesive is used to adhere wood to concrete base floor, and a combination of grout and sawdust fills in the gaps. The floor is then finished with three coats of low-VOC polyurethane.
34. Rattan stools from Cane-line
35. SICO® Conference Tables - Multi-purpose, adjustable height tables with a GREENGUARD® certification for improved indoor air quality.
36. Steelcase Nose chair with base, which is flexible and moveable for multiple functions in the small space. The personal table is adjustable and large enough to support digital and analog resources. Has MBDC's Cradle to Cradle Silver certification, BIFMA level 2 certification, and Indoor Advantage Gold from SCS for indoor air quality
37. Aurea self-illuminating, energy efficient light fixtures
38. Whisperwave acoustical clouds

