

# Designing for Autism: A Case Study



Maine Behavioral Healthcare  
**The Glickman Lauder Center of Excellence in  
Autism and Developmental Disorders**

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E4H Environments for Health Architecture

# Overview

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- Best Practices in Autism Design
- Incorporating Biophilic Design
- Sustainability
- Creating the “Autism Classroom of the Future”





# Best Practices in Autism Design

## Key Considerations

- Lighting - natural, adjustable, and circadian
- Finishes
- Acoustics
- Connection to Nature
- Safety

## Space Needs

- Sensory Zoning
- Space for students to recalibrate
- Life Skills Classroom
- Sensory Rooms





- BUILDING SUPPORT
- CLASSROOM
- CORRIDORS
- OFFICE
- STAFF SUPPORT AREAS
- STAFF WORK AREAS
- TOILET ROOM





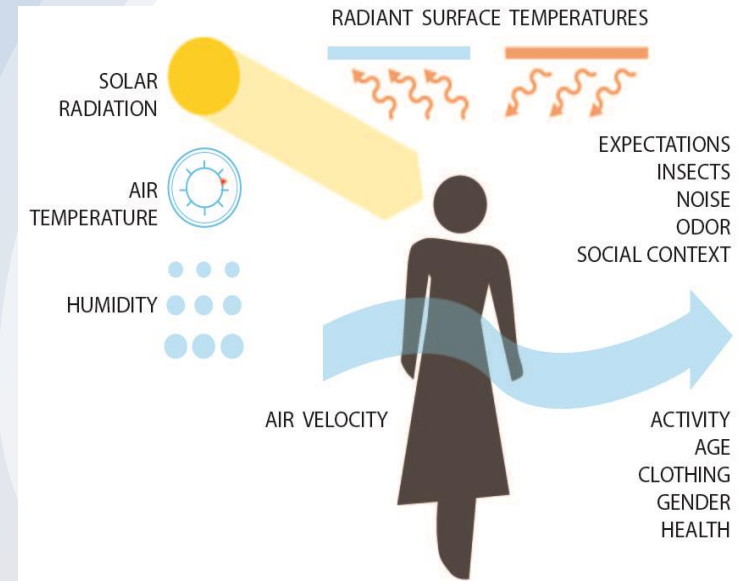






# Biophilic Design

- Greater exposure to nature has also been shown to improve overall cognitive development. (Dadvand et al., 2015).
- Provides a buffer against life's stresses
- Promotes social bonding
- Good daylighting "improves tests scores, reduces off-task behavior, and plays a significant role in the achievement of students" (Kats, 2006)
- Children learn 20-26% faster with proper daylighting in schools







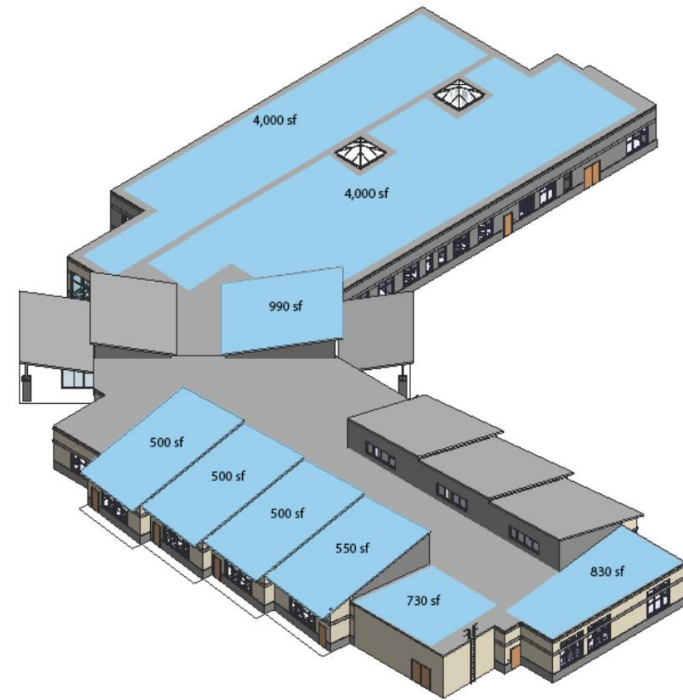


# Sustainability

- Original HVAC System Design - VAV boxes
- Proposed Design - VRF System with DOAS
- Solar potential for Net-Zero Building

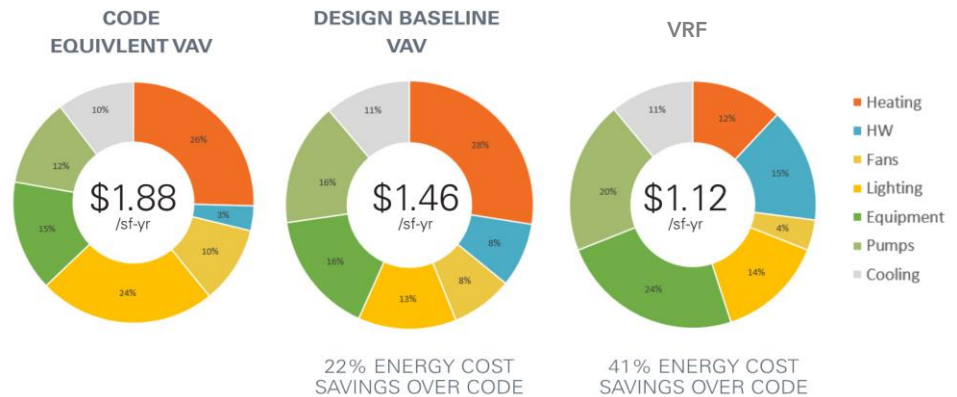
## Benefits

- Quieter System = reduces distractions
- Decouples ventilation and heating/air conditioning
- Reduces energy demand
- System operates based on occupancy
- Increased occupant comfort
- No recirculating air



Thornton Tomasetti

## OPERATING COSTS





# Designing the “Autism Classroom of the Future”

- Wearable biosensors
- Real-time data capture
- Integrated AV system
- Observation Rooms







# Thank you!



ENVIRONMENTS  
FOR HEALTH  
ARCHITECTURE



[https://www.youtube.com/watch?v=d1-6xx\\_6Tpg](https://www.youtube.com/watch?v=d1-6xx_6Tpg)