

The Mirenda Center for Sport Spirituality and Character Development



Zachary Heilman
Mechanical Option | 2011

Introduction
 Building Function
 Existing Mechanical System
 Ground Coupled Heat Pump
 Life Cycle Cost
 Mezzanine Proposal
 Conclusion



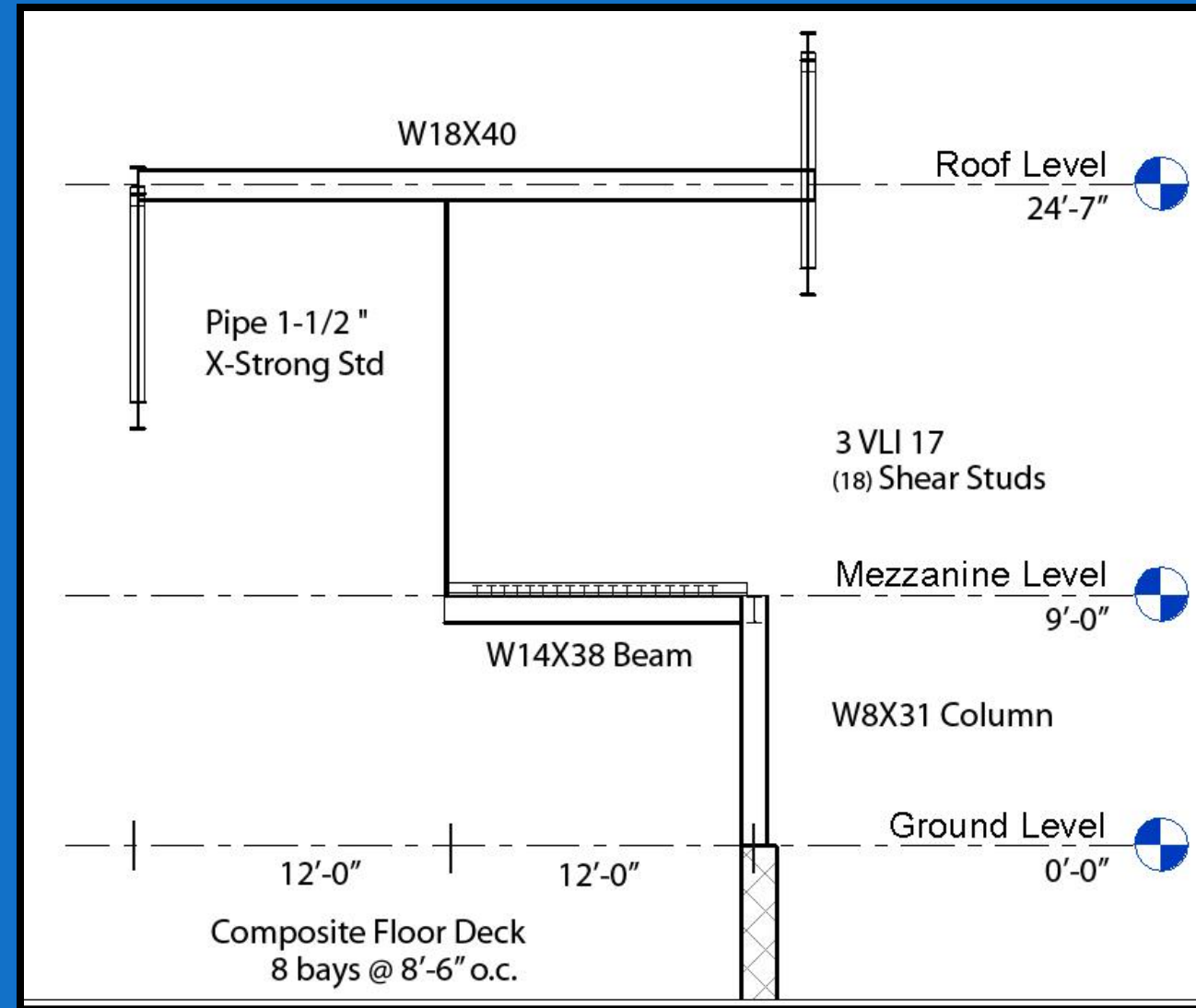
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 Presents
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 One Neumann Drive Aston PA 19014-4707



ASHRAE Applications

Rg(a,m,d)=	Thermal Soil Properties
Wc =	Input power of Pump for Cooling
Wh =	Input power of Pump for Heating
Tf =	Fluid Temperatures for Scenario
Lc =	76,437 ft
Lh =	66,215 ft
Wells Cooling =	95
Wells Heating =	82

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Structural Breadth

- Composite Deck with Shear Studs
- Suspended Support Tensile Strength ties in to Purlin b/n Truss that span 138'
- Steel Column Bearing Masonry Wall