

CLIMATE

ARID

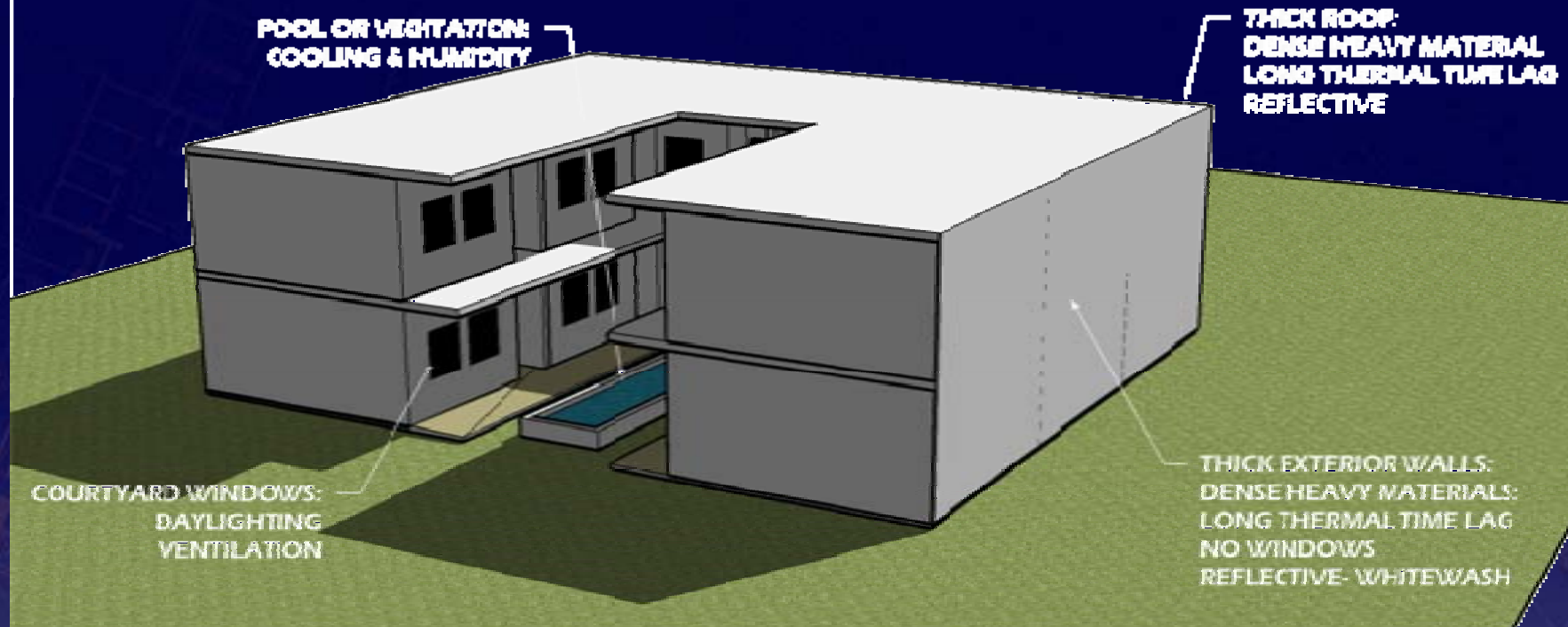
Climate & Characteristics	Requirements	Design Responses
Very High Insolation Reflected Radiation from Ground Large Daily & Annual Temperature Variation Low Humidity / Dryness Sandy Environment with Dust Storms Strong Ground/Building Glare	Minimize Heat Loss Winter Minimize Heat Gain Summer Heat Reduction over Air Movement Dust Barriers Utilize Low Humidity & Humidity Creation Glare Protection Utilize Daily Temperature Variation for Heating (winter) / Cooling (summer)	Shaded Courtyard Form E-W Orientation Wall Roof Mass w/ Large Time-Lag over Insulation Glare / Dust Screening Courtyard Facing Windows with Minimal or No Outside Windows Ducted Wind Capture Courtyard Water Feature or Vegetation to enhance evaporative cooling

The key to designing in the Arid Zone are the walls which provide protection from heat gain, intense glare and windblown dust. The Building form also plays a role in shade creation and with plants and pools- for evaporative cooling.



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Courtyard Form:

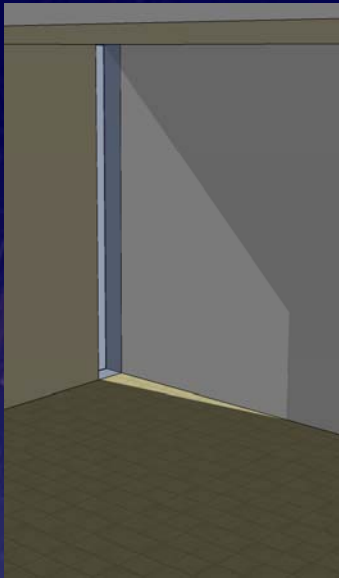
Height of Courtyard should exceed any other dimension. Wind Catchers should be ducted thru a basement then to courtyard. Orient building to obtain maximum courtyard shading. Copy local wall and roof designs.



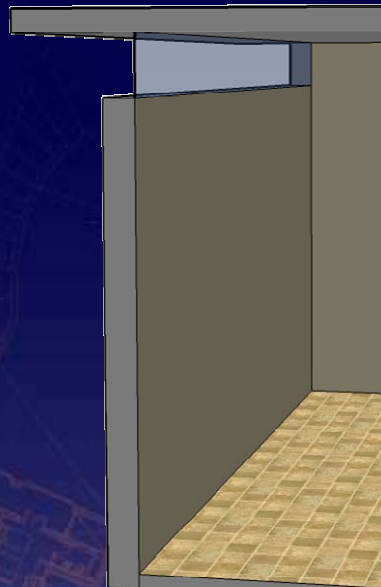
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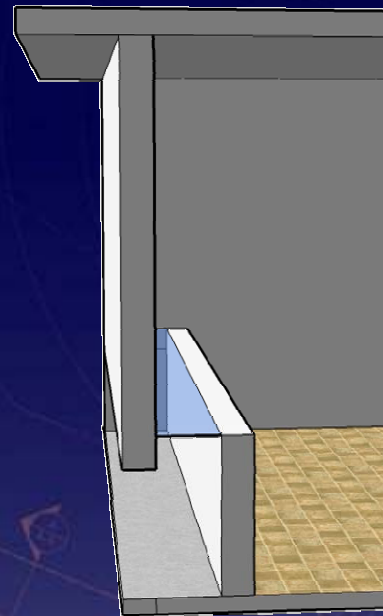
Traditional window placement in exterior walls to reduce glare from ground and buildings.



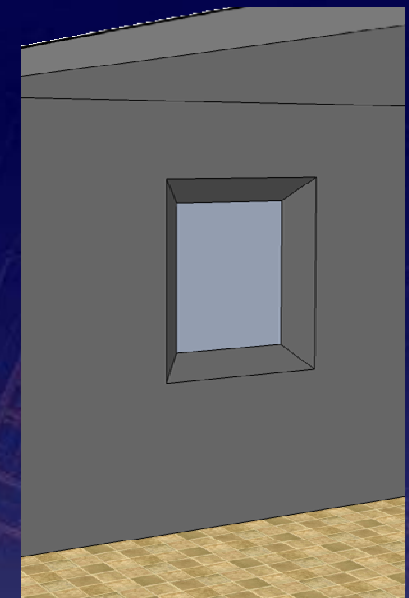
Corner



Ceiling



Floor



Splay

Window size should be small in few in number.



Any Questions?

This concludes the American Institute of Architects Continuing Education Systems Program.



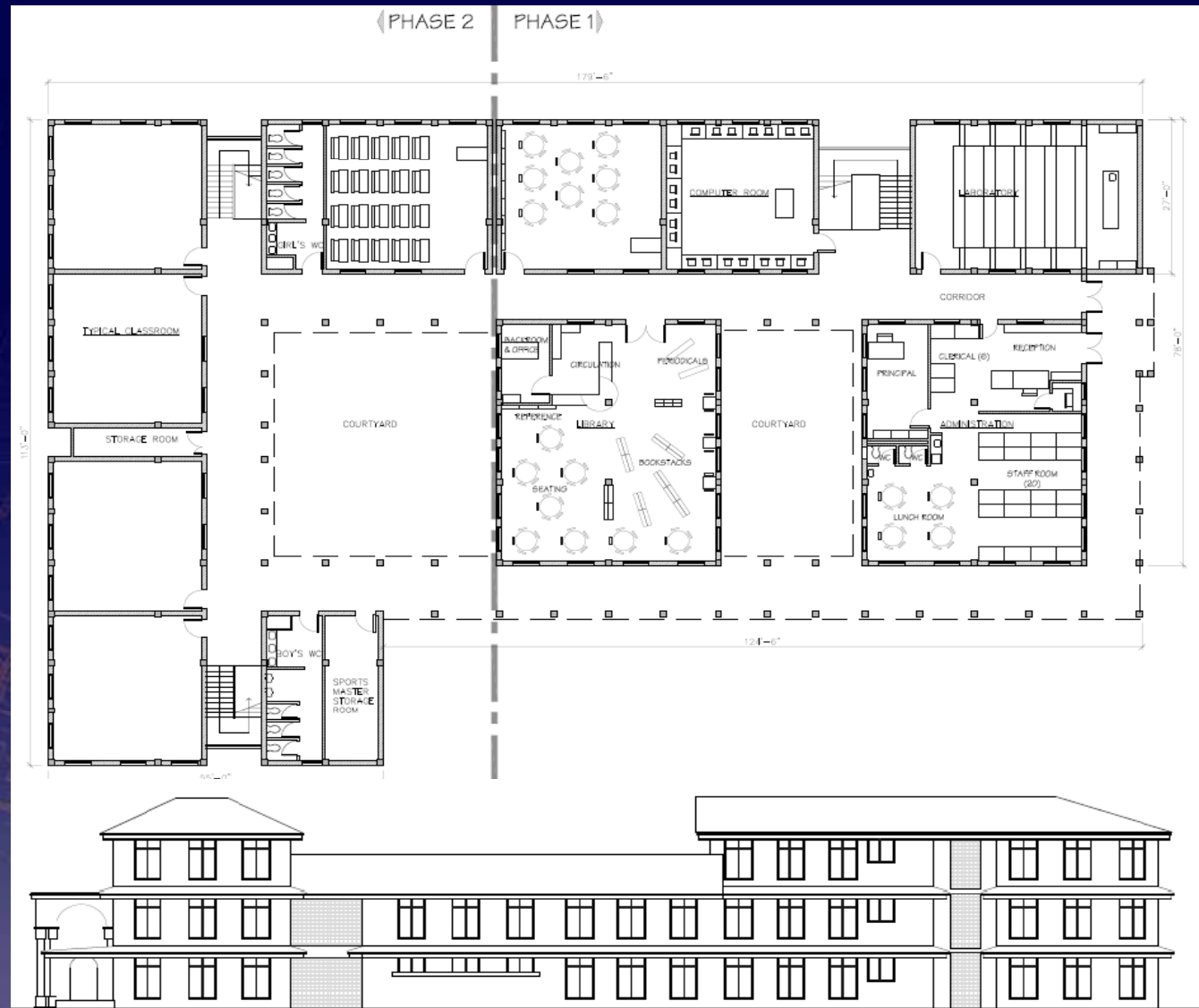
References:

Tropical Architecture in the dry and humid zones, Maxwell Fry and Jane Drew, 1982

designing a world of hope

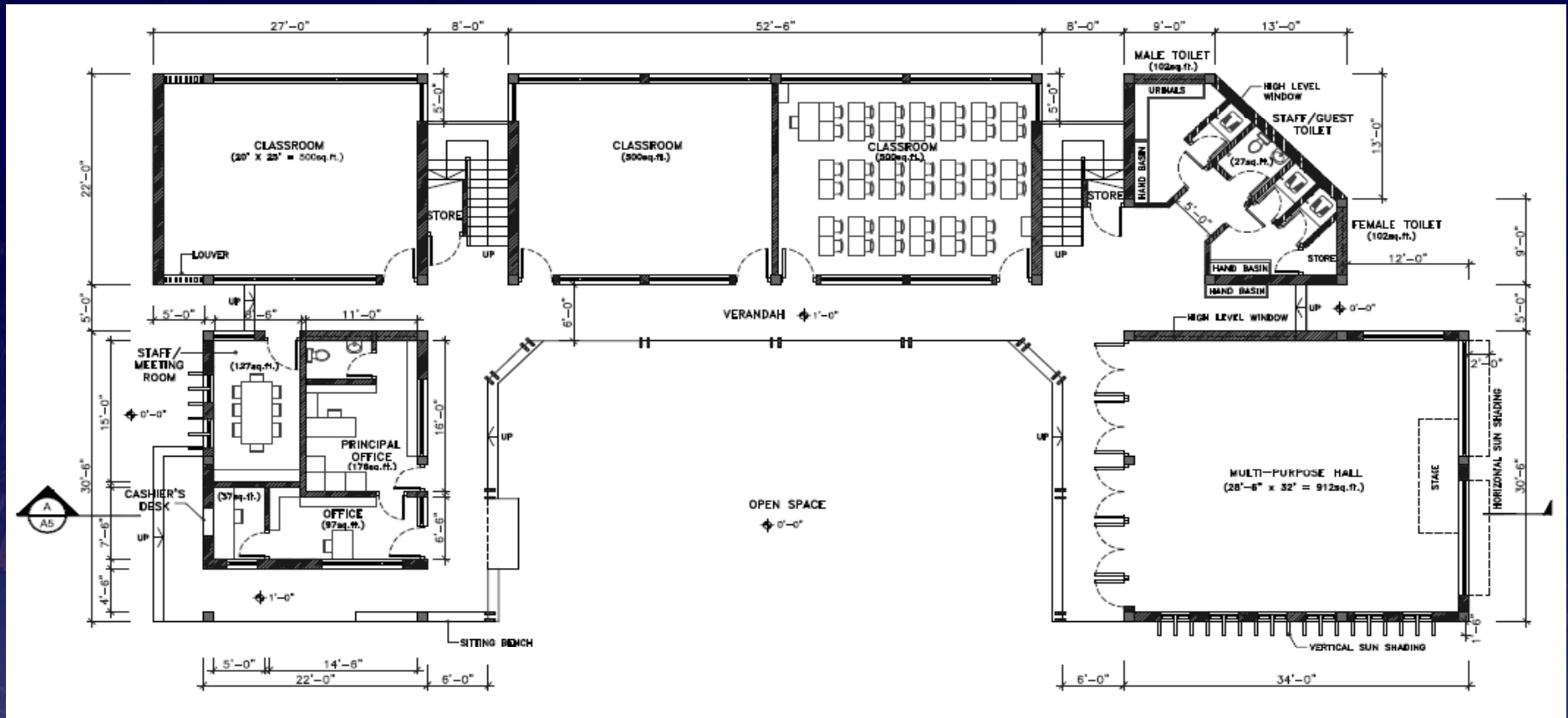
eMi examples

United Evangelical
Mission, India



designing a world of hope

eMi examples



United Evangelical Mission, India



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eMi examples

Shepherd's House, Haiti

