SIKANDAR PORTER-GILL
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DEPARTMENT OF ARCHITECTURAL ENGINEERING
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HEIFER INTERNATIONAL CENTER

LITTLE ROCK, ARKANSAS
GRAVITY REDESIGN

- Queen Post Girder
  - Offers the ability to integrate other engineering disciplines

Queen Post Girder

Floor System Selection
• Queen Post Girder
  • Floor System Selection

Queen Post Girder
  • Reduce flexure on member
  • Combined axial and bending member

Potential Floor System

- Tongue and groove wood plank
  - Spacing will be an issue

- Concrete floor system
  - Additional weight may be of concern
  - Would not match architectural style of building

- Composite concrete and wood system
  - Intricate calculations required

- Steel decking and concrete system
  - In use in existing building
  - Would match redesign of building

- Post tensioned slab
  - Not an economical solution
  - Would have to span in the short distance thus decreasing the utility of the post tensioning