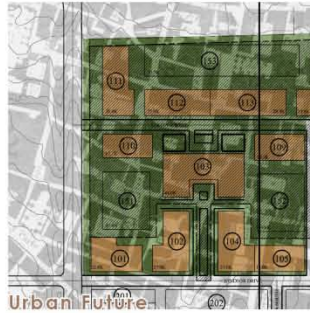




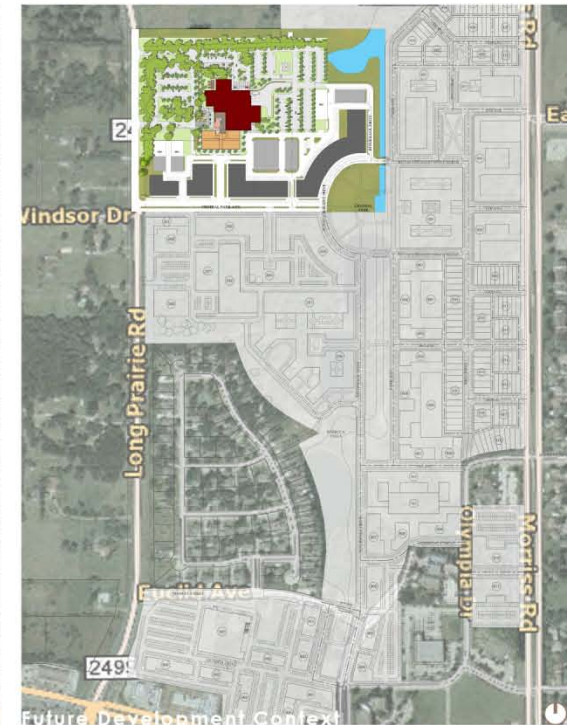
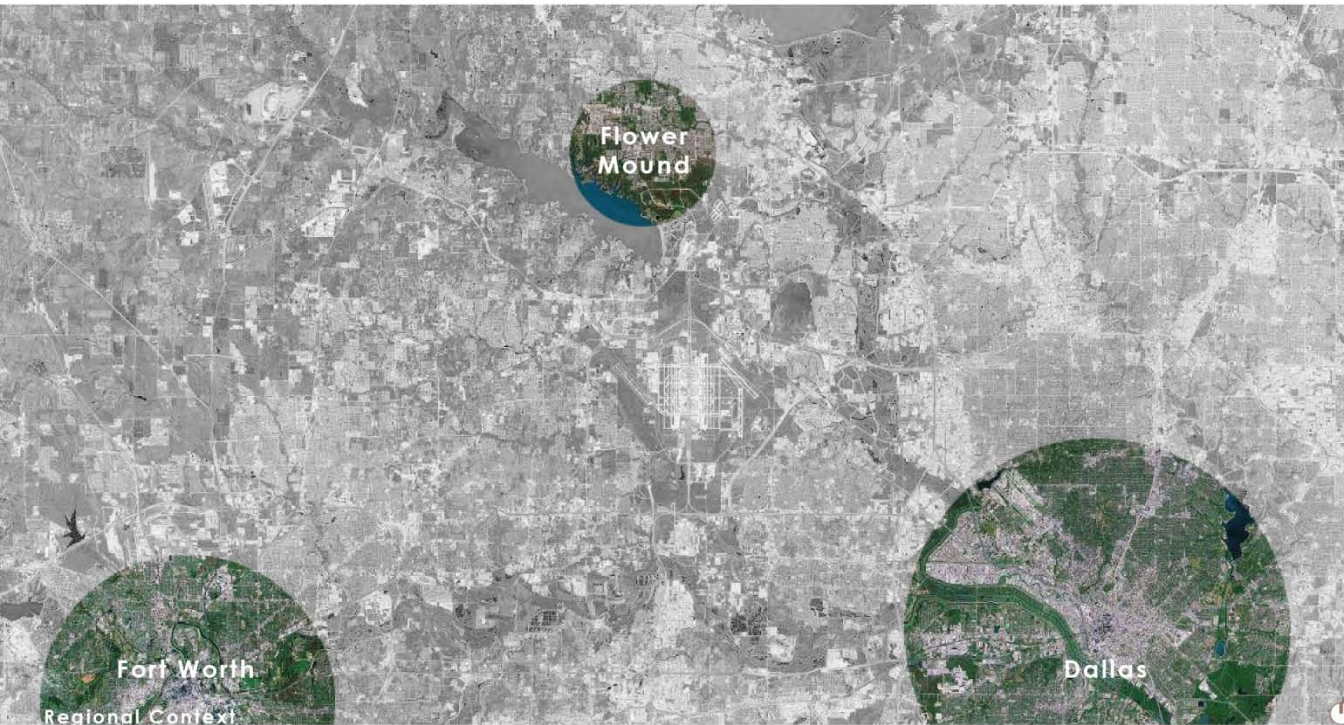


# Presbyterian Hospital Flower Mound

## Influences



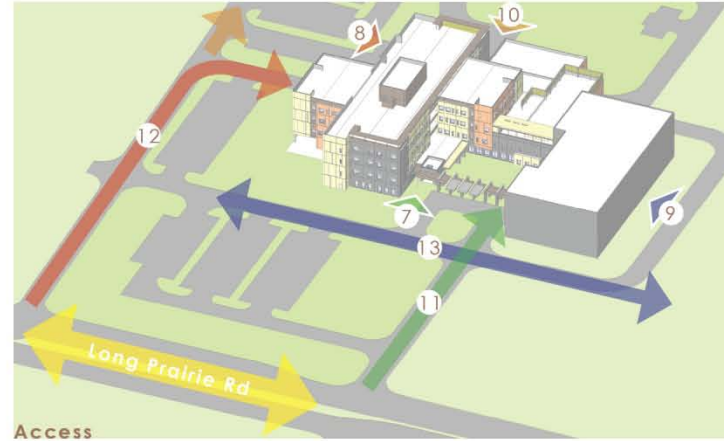
Place defined by context and a promise of a future development inspired the design direction of the hospital. Proposed as part of a 120 acre town center development and placed upon a heavily wooded 12 acre site, the design of the hospital reconciles the rural nature of the site and its urban future.



## Place + Context



Presbyterian Hospital  
Flower Mound



Innovative planning strategies were used to streamline operations, cut building costs and improve the healing and working environment by:

1. Consolidating Women's Services on one floor, including in the MOB
2. Placing Surgery on the same floor as the step down surgical patient rooms
3. Designing Surgery to share PACU with ICU as flex space
4. Designing Pre-op/Hold/Rec adjacent to Imaging as flex space
5. Designing Pre-op/Hold/Rec adjacent to ED as swing space

The resultant facility was built with less than 1,800 sf/bed for a cost of \$54 Million through strategic use of space and application of LEAN design principles

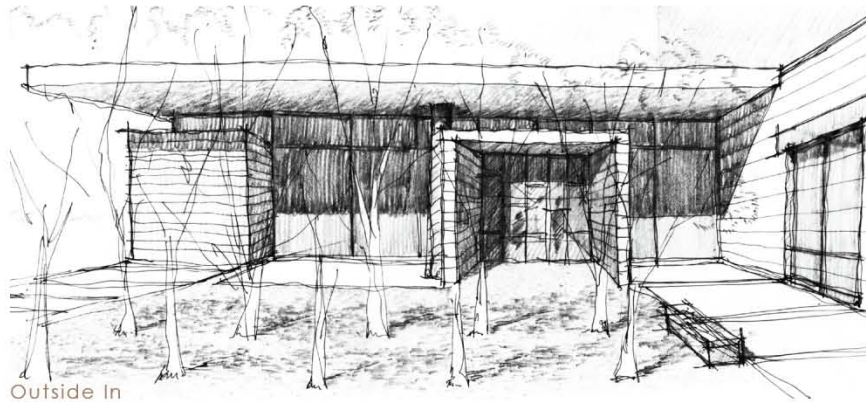




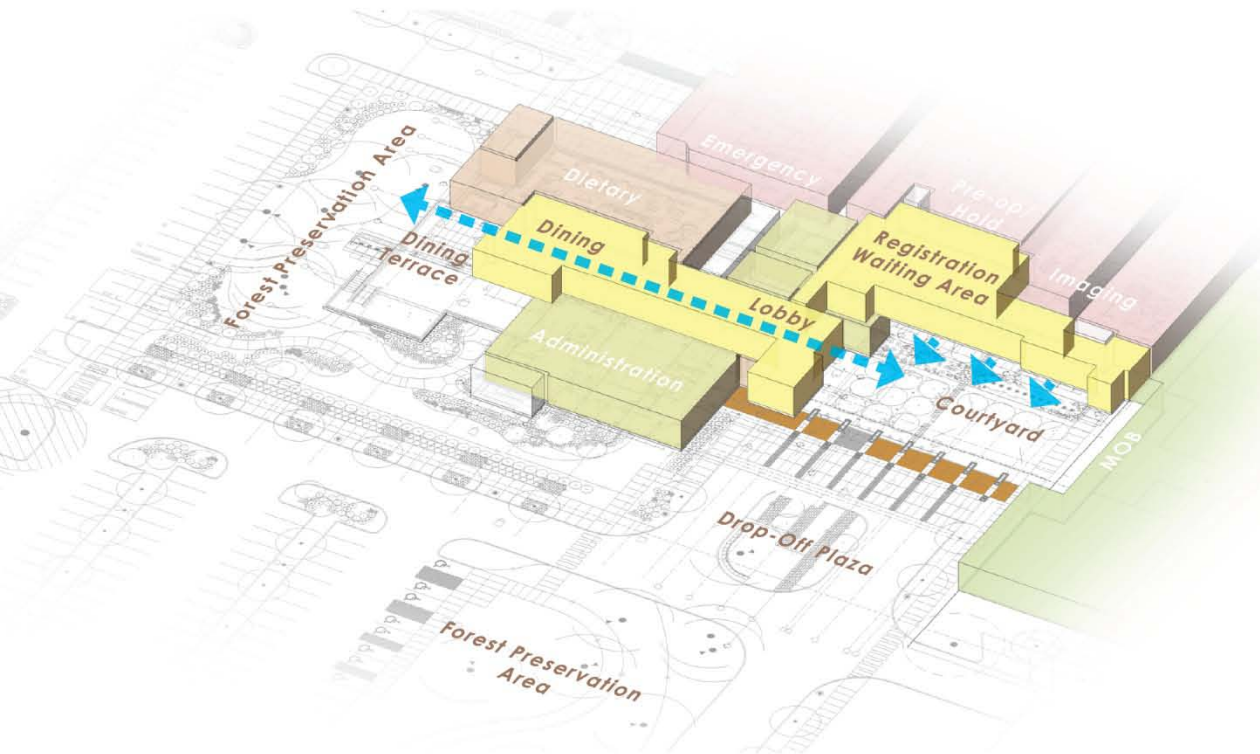
# Presbyterian Hospital Flower Mound



Inside Out



Outside In

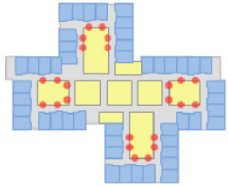


## Concept + Experience

The commitment to providing a level of experience unlike any other hospital for patients, visitors and staff lead the design to:

1. Respond to its forested context by retaining mature trees adjacent to public areas at the Dining Terrace and Drop-Off Plaza.
2. Create interdependent outdoor and indoor spaces adding richness to the experiences in the Lobby, Meditation Room, Dining and Waiting Area.
3. Connected interior spaces enhance openness while limiting the building area.
4. Seek LEED Silver Certification by:
  - 50% reduction of potable water used for irrigation by using native landscaping
  - 33% reduction of potable water use by using low flow plumbing fixtures
  - 15% energy usage reduction through efficient HVAC and lighting systems
  - 60% of construction waste recycled
  - 30% of construction materials w/ recycled content
  - 35% of construction materials produced within 500 mile radius



	 <p>Flower Mound</p>	Average of Sample Facilities
• Unit Size	24 Beds	n/a
• Unit Area	15,960	n/a
• Patient Services Area/Bed	290 SF/Bed	258 SF/Bed (ave.)
• Unit Support Area (target >20%)	28%	23.1% (ave.)
• Circulation Area/Bed	189 SF/Bed	195 SF/Bed
• Efficiency (function to circulation)	1.40	1.47
• SF/Bed (including core)	665 SF/Bed	673 SF/Bed
• Perimeter Distance/Bed	20 FT	24 FT
• Travel Distance Data	Max. Min. Avg.	Max. Min. Avg.
• Nurse Hub	23' 8' 12'	79' 11' 35'
• Charting	23' 8' 12'	28' 9' 15'
• Supply Center (to servers)	50'(8') 8'(8') 25'(8')	109' 14' 50'
• Service Elevator	226' 74' 144'	246' 78' 167'

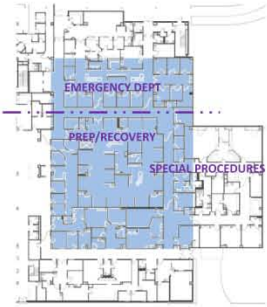
1. Budgeted Const. Cost: \$60,236,849
2. Actual Const. Cost: \$54,049,801
3. Team Savings: \$6,187,048
4. Team Contingency: \$3,000,000





## Beneficial Adjacencies

Program and Plan for Swing Use of Space During Opposing Peak Hours



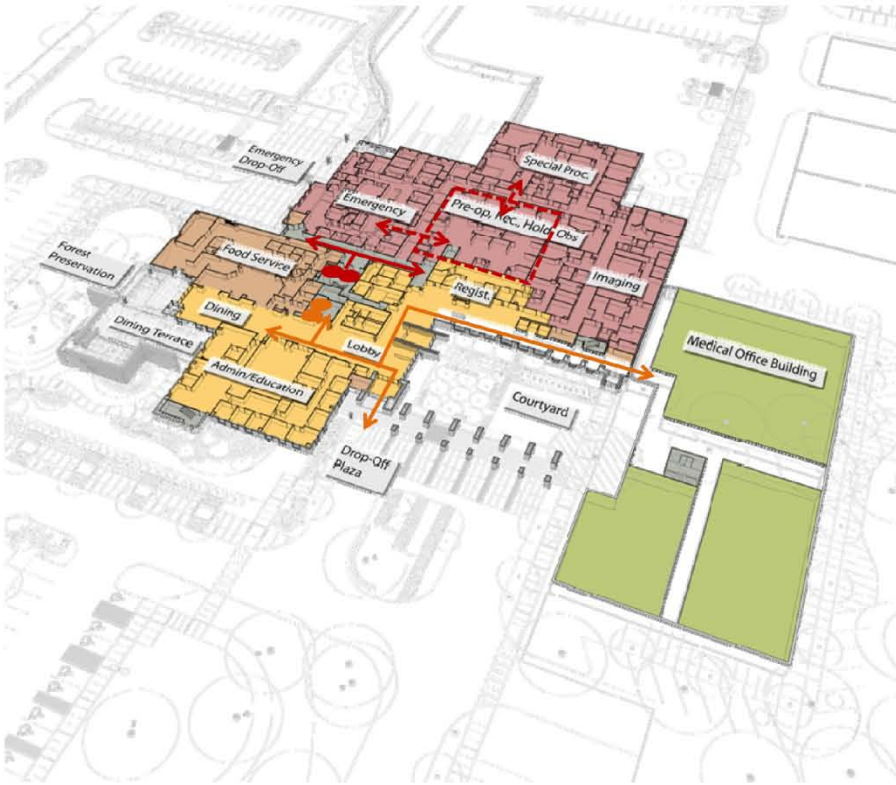
Planned capability for occasional overflow, swing-use, or future re-assignment

## Beneficial Adjacencies

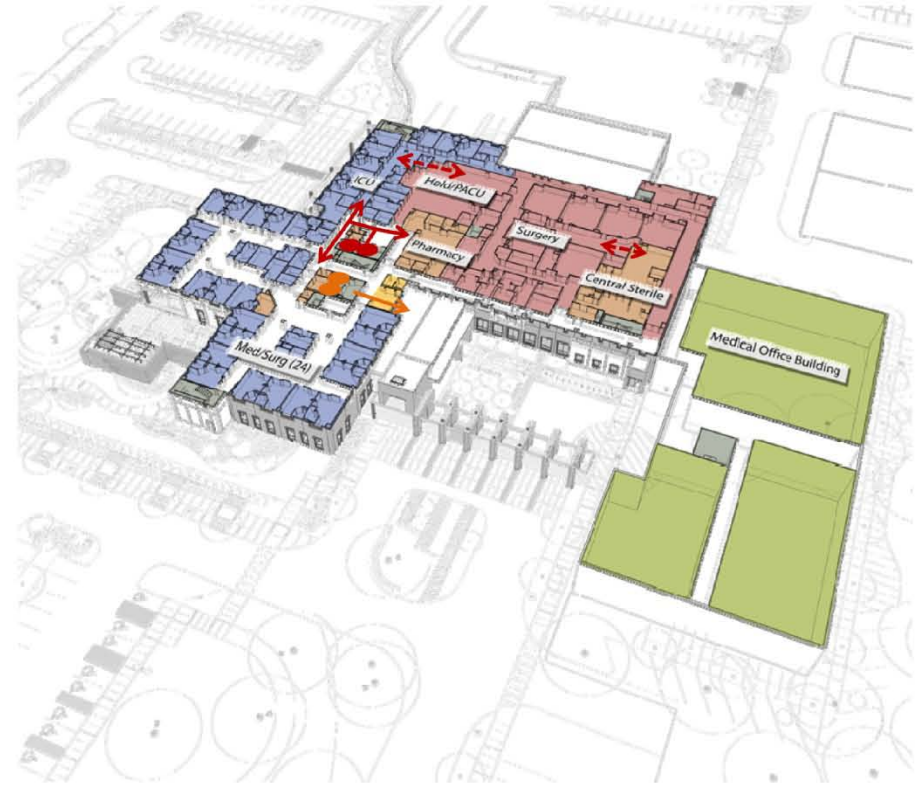
Shared Support Space between Related Adjacent Departments



Presbyterian Hospital  
Flower Mound

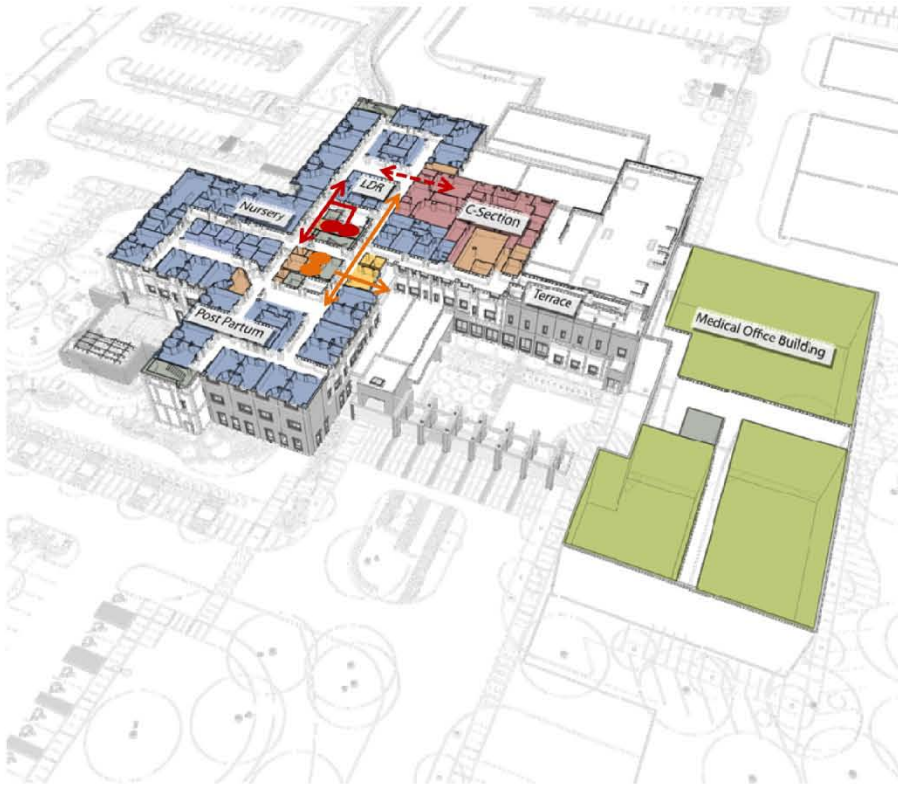


01 Non-Invasive Services

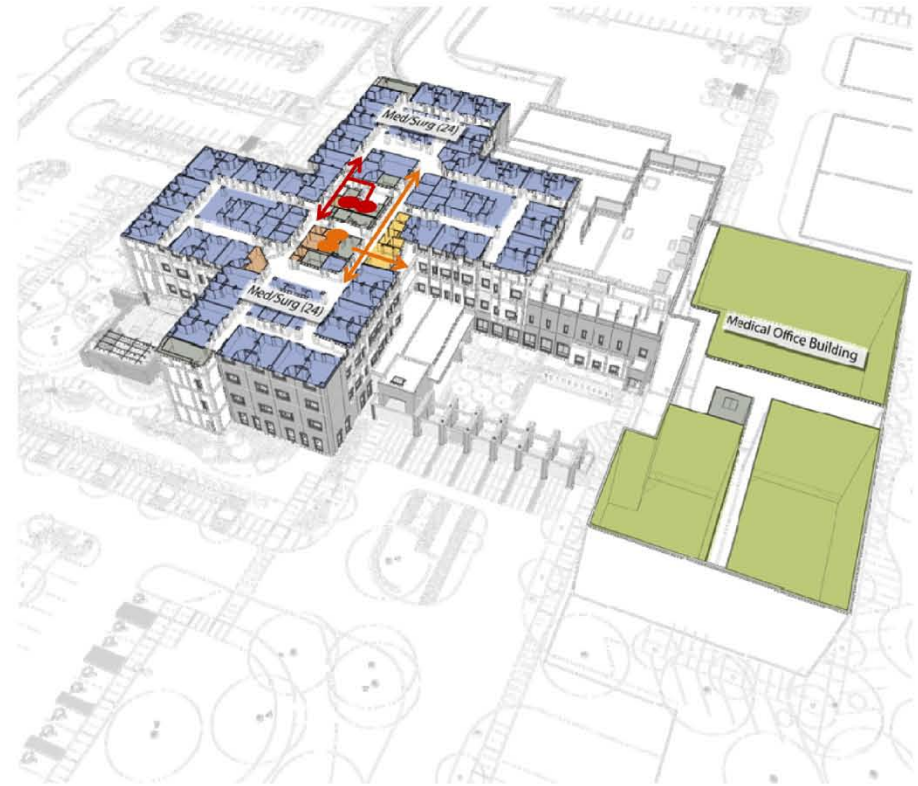


02 Invasive Services / ICU





03 Women's Services

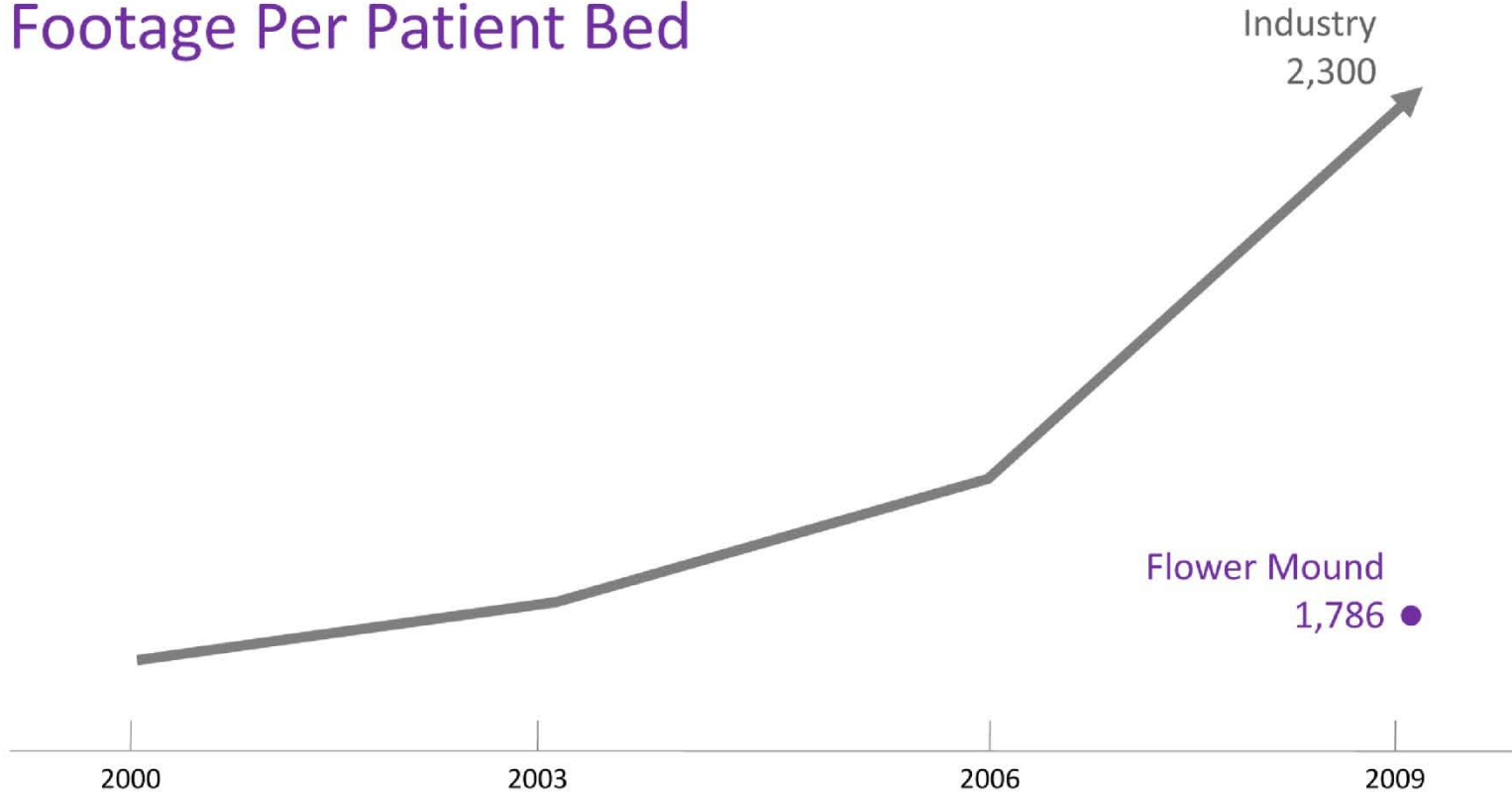


04 Inpatient Services

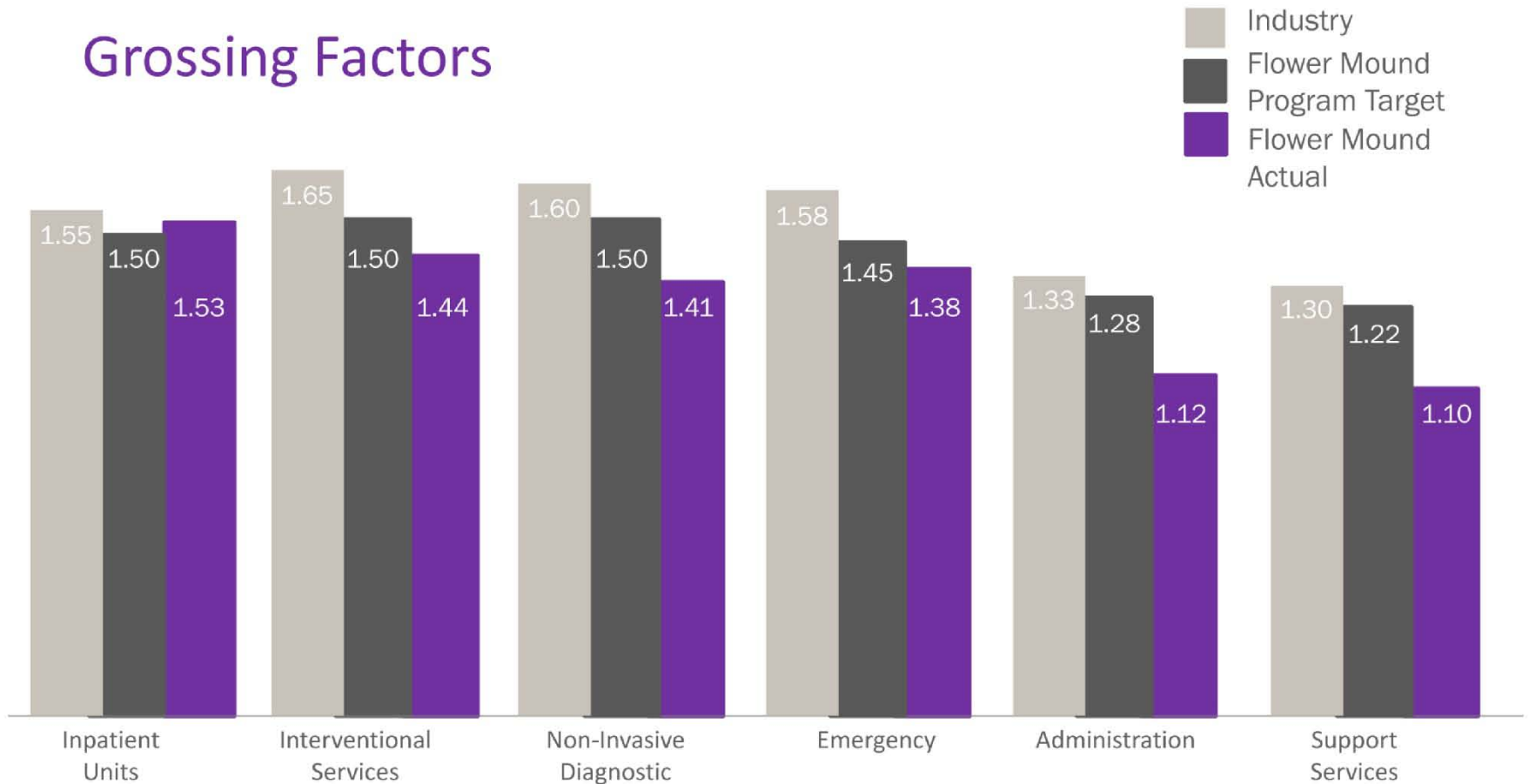




## Total Hospital Square Footage Per Patient Bed

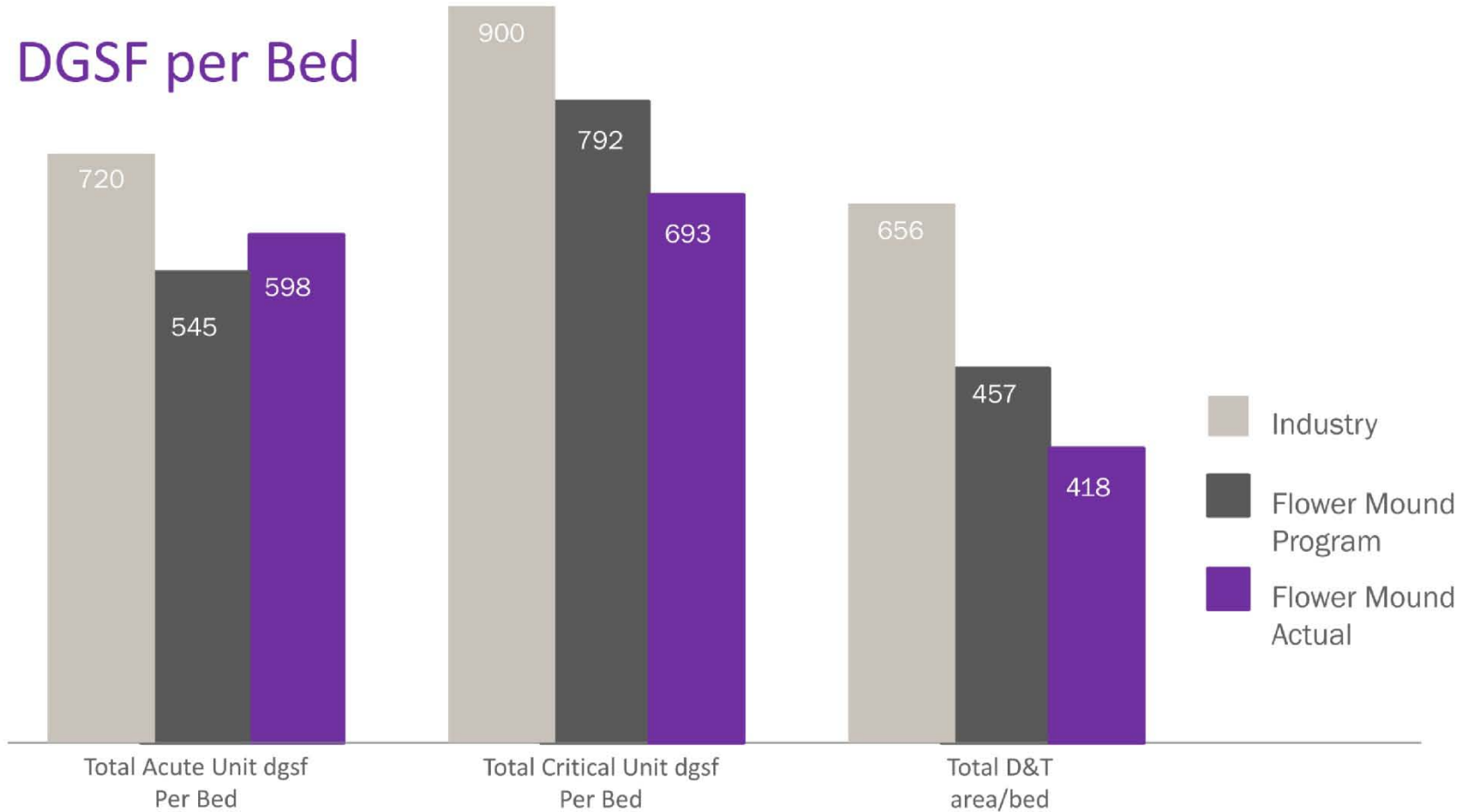


## Grossing Factors

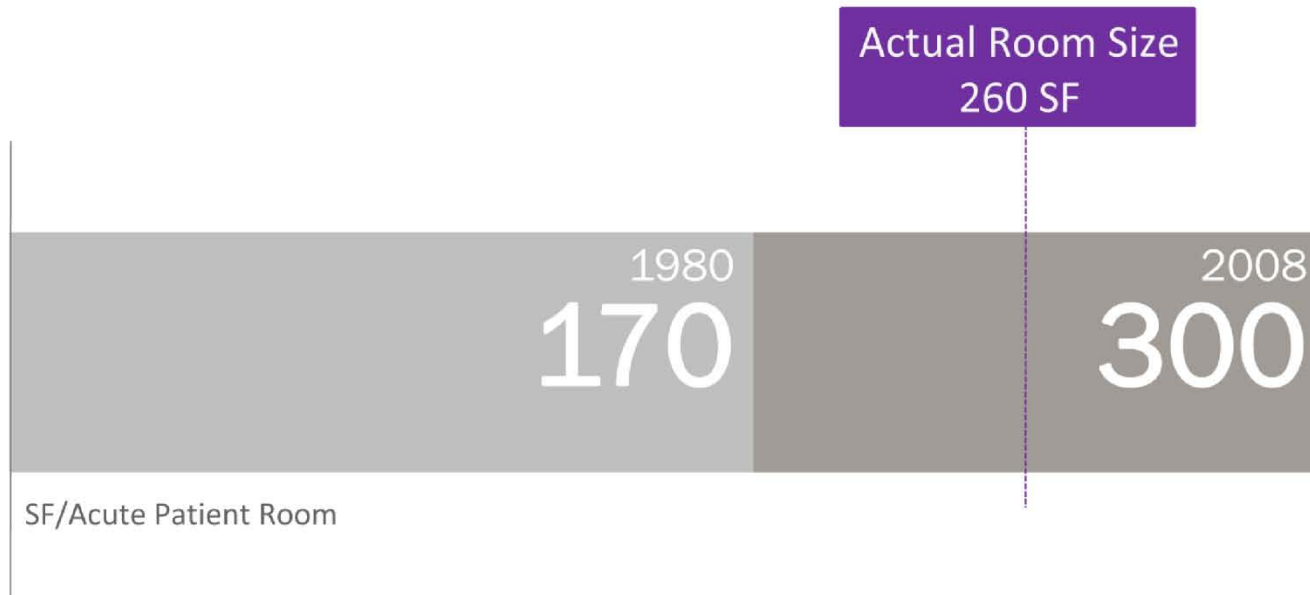




## DGSF per Bed



## Square Footage: What's Appropriate?





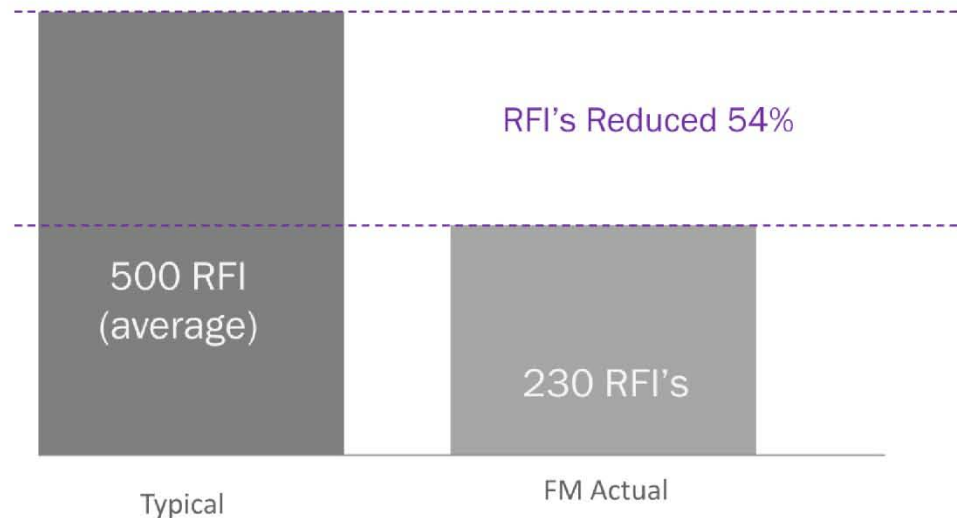
## Budget vs. Result

- Budgeted Construction Cost = \$60,236,849
- Actual Construction Cost = \$54,049,801
- Team Savings = \$6,187,048 (Overall Cost Reduced Approximately 10%)
  - Used at Owner's discretion for reinvesting in project or THR system



## BIM Benefits

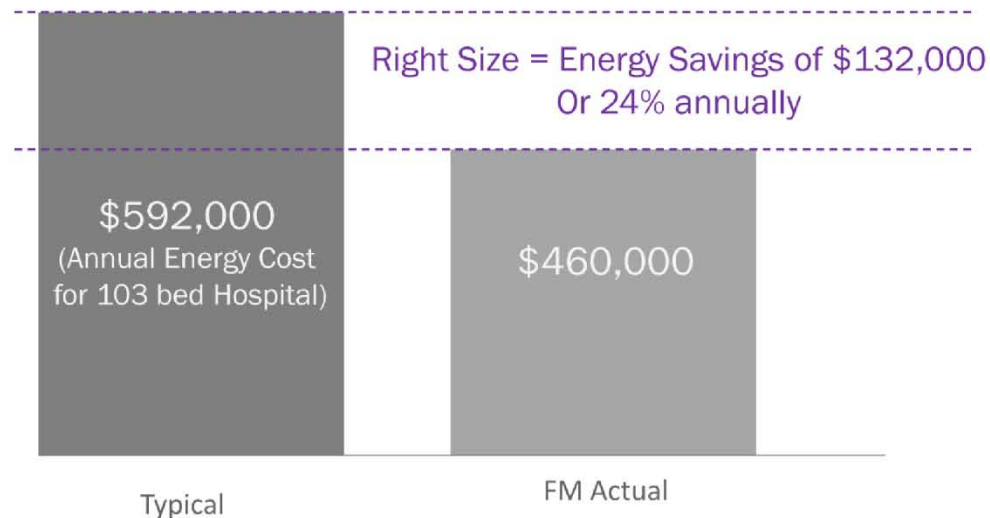
- Contractor and subs can add additional construction detail to the BIM model and identify potential conflicts before they occur in the field.
- Reduces number of RFI's due to better coordination
  - Typical healthcare project of this size and complexity would generate 400 – 600 RFI's
  - THPHFM generated about 230 RFI's, all but 40 were confirming RFI's





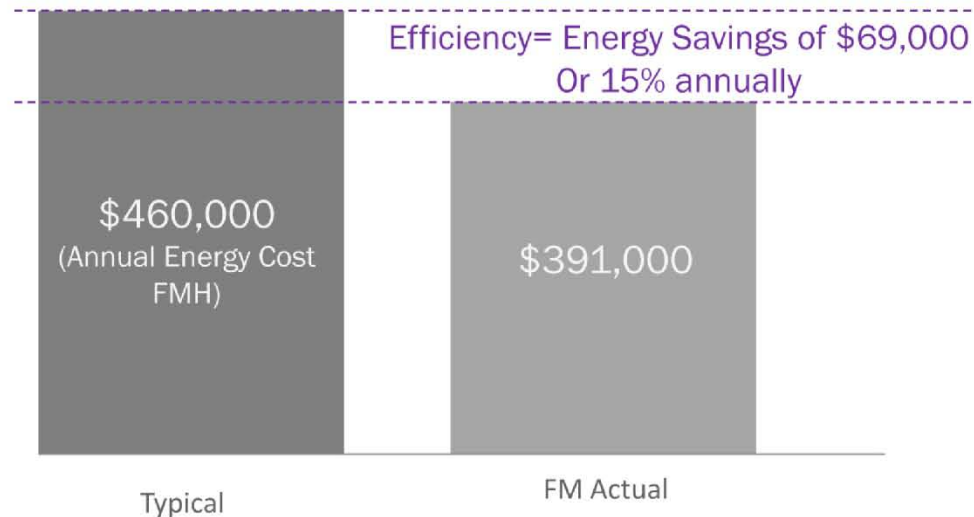
## Lean Design/Construction Results

- Right sizing equals monetary savings
  - Typical hospital averages 2,300 sf per bed, THPHFM is 1,786 sf per bed. This represents an average savings of 514 sf per bed x 103 beds = 52,942 sf saved. The average energy cost per sf for hospitals = about \$2.50 per sf, therefore the annual savings equates to about \$132,355 annually (about \$1 million in a 7.5 year span).



## Lean Design/Construction Results

- Efficiency and flexibility equals monetary savings
  - Efficient mechanical equipment (15% better than code). Average energy cost per sf for hospitals = about \$2.50 per sf, 184,000 sf x \$2.50 per sf = \$460,000 annually x 15% savings = \$69,000 annual savings.





The courtyard organizes the plan and orients the user as a wayfinding feature. Furthermore, it is an extension of and a replacement for a costly oversized conditioned lobby space. The visual and physical connection of public spaces to the courtyard is an aesthetically and pragmatically critical relationship.







## Presbyterian Hospital Flower Mound

The dappled sunlight falling through the leaves onto the bench, the crunch of the gravel underfoot, the sound of the water falling on the rocks...

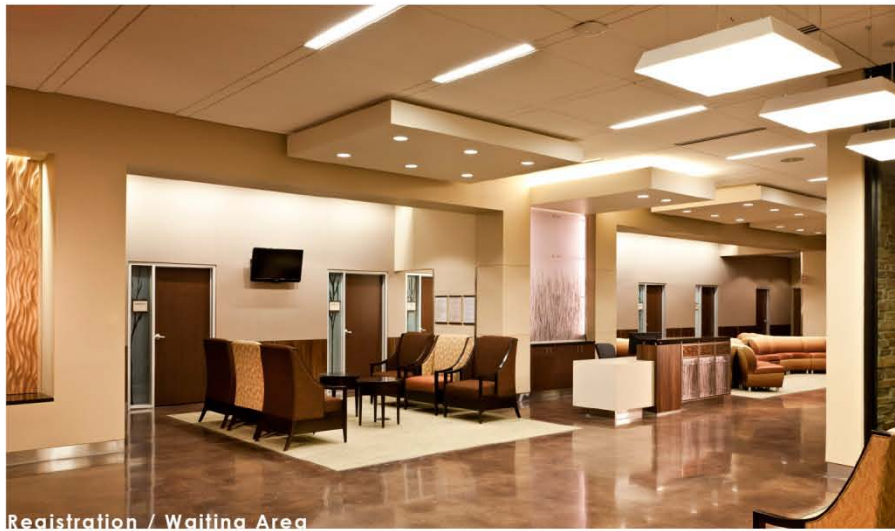
These are the experiences that provide the intangible benefits.







Lobby Waiting



Registration / Waiting Area

# Presbyterian Hospital Flower Mound

Cozy places - momentarily your own  
- create a sense of belonging and intimacy.

Public areas with views toward light and nature focuses on urban & rural outdoor spaces to save costs and enhance the indoor experience.



Courtyard



Water / Light



Waiting Area / Connected Courtyard





Dining



Lobby

## Presbyterian Hospital Flower Mound

Arrival through the trees and the drop-off plaza - designed to heighten the sensory experience - culminates with the experience of the courtyard. Adjacent to the lobby as part of the internal street, the dining patio reintroduces the preserved forest areas and connects back to nature. Continuity and transparency reconcile the formal and the informal.



Dining Trellis / Light + Shade



Entry Loggia



Dining Trellis