Learning Objectives
1. Learn how the team implemented interventional platform design and the value brought to reorienting its facilities and campus around the patient.
2. Learn how checks and balances in the team’s decision-making process led to culture-changing sustainable design solutions.
3. Explore the advantages of colocating architects, designers, engineers and construction management at the project site.
4. Learn how an $800 million project budget was implemented under a fast-track approach over a 5-year timeline without increases.

Presenters
Jerry Johnson, Design Principal, Perkins+Will
Eileen Dwyer, Former Director of Rush Office of Transformation
Joe Aiu, Senior Project Manager, Power / Jacobs Joint Venture

Rush University Medical Center
Mission
The mission of Rush University Medical Center is to provide the very best care for our patients. Our education and research endeavors, community service programs and relationships with other hospitals are dedicated to enhancing excellence in patient care for the diverse communities of the Chicago area, now and in the future.

Vision
Rush University Medical Center will be recognized as the medical center of choice in the Chicago area and among the very best clinical centers in the United States.
Rush Campus Transformation

- 10 Year Campus Transformation Project
- $860 million dollar total budget for all 3 phases of campus transformation
  - Phase I: Loading Dock, Central Power Plant, Parking Garage, Outpatient Facility
  - Phase II: New Patient Care Tower
  - Phase III: Renovation of existing facility

Rush Campus Transformation

Office of Transformation (OOT) established in 2005 to act as owners representative throughout the transformation process
- 7 FTE
- Primary role to coordinate between end user and the multitude of consultants, architects, engineers, project managers, equipment planners, etc.

Campus Transformation Objectives

- Create a campus that matches and enhances the high quality of patient care
- Provide 21st Century Medicine
- Support Rush’s Vision & Goals
  - Colocate related services to enhance safety and efficiency
  - Consolidate patient care at the east end of campus
  - Interventional Platform
  - Center for Advanced Emergency Response
  - Advanced imaging centers
  - Private NICU rooms
  - Medical Center of Choice
  - Employer of Choice

Transformation Guiding Principles

- Optimize the patient and family experience
- Conscientiously consider safety of patients and staff
- Organize services around delivery of care
- Utilize technology on behalf of patients and staff
- Ensure integration of research and education
- Design a comfortable environment to support Rush core values
- Anticipate change through adaptable/flexible best practices
- Embrace the community through design
- Incorporate sustainable design where applicable
- Standardize when possible
Project Team Organization

Rush University Medical Center
Office of Transformation

Program Manager
Architect

M&E
Structural
Site
Mechanical
Electrical
Sprinkler
Sprinkler
Mechanical
Sprinkler

1. New Bed Tower
   - 830,000 sf, 304 Beds, 14-Story, $654 Million

2. Orthopedics Ambulatory Building
   - 207,000 sf, 5-Story, $46 Million

3. 600 Car Parking Garage

4. Central Plant

5. Underground Materials Handling Facility

6. Entry Pavilion

7. Renovation of Atrium Building

8. Enabling Projects
   - Renovation of Existing Garage including 4th floor transfer
   - New Surface Parking
   - Reclad Jelke Building
   - Design Workspace for OoT Team

Rush Transformation Projects

Rush Campus Data:

- 30.5 Acres
- 22 Buildings
- 4.3 Million SF
- 8500 employees
- Buildings dating 1888 to 2000
- Anchor of Illinois Medical District (IMD)

Site Plan 2006

Completion 2009
A. Surface Parking
B. Central Power Plant & Parking
C. Orthopedic Ambulatory Building
D. Material Mgt (renewal/Loading Dock)

Phase I
Phase I: Completion 2009
A. Surface Parking
B. Central Power Plant & Parking
C. Orthopedic Ambulatory Building
D. Material Mgt (robots)/Loading Dock

Phase II: Completion 2012
E. East Tower Entry Pavilion*

Phase III: Completion 2014
F. Atrium Renovation
G. Kellogg Renovation
H. Professional Buildings Renovation

Phase IV: Completion 2015
I. Demolition of Super Block - Sins, Rawson, Jahn, Murdock
Lower Level Materials Management after Transformation Project
Program Stack

New Building Design = New Operations

- More than new buildings
- New ways to work & deliver patient care:
  - New electronic medical record
  - Integrated clinical services
  - Appropriate departmental adjacencies
  - Patient safety
  - Efficient work flows
PATIENT UNIT FEATURES:

1. Identical unit layouts (symmetrical)
2. Decentralized nurse stations (patient care at each patient unit)
3. "Same hand" approach to room planning for all patient rooms and treatment rooms
4. In-board toilets
5. Staff-only service area (green) adjacent to the vertical circulation spine
6. AGV enhanced clean and soiled material delivery to the service area
7. Pneumatic chute system for trash and soiled linen
8. "Transparency" provided at patient unit tips and public area for daylight and views
9. Standards & Code equivalencies that allowed avoidance of CBC mandated 3-hour and 4-hour separations.

Level 12-14: Acute Care Units

Clinicians Directing Design

Full scale mocked up rooms helped drive design plans:

- Operating Room
- Acute and Critical Care Patient Rooms
- Prep/Recovery Room
- Labor and Delivery Room
- ED Treatment Room
- NICU Room
Center for Advanced Emergency Response: Level 1

- ROOF GARDENS
- ENTRY
- NEW BED TOWER
- NEW DIAGNOSTIC BASE
- EXISTING BED TOWER
- EXISTING DIAGNOSTICS

Project Distinctions

- Cutting Edge Design
- Sustainability
  - Declared Chicago’s first green campus
- Design standardization
- Universal design
- Design-build programs
  - Automated Guided Vehicles (AGVs)
  - Pneumatic trash & linen systems
  - Exterior curtain wall
  - 6" pneumatic tubes
  - Casework
- Center for Advanced Emergency Response
LEED Gold awarded
February 29, 2012

Team Colocation

- Relationship between Owner, Designer and Constructor
- Fast Track Schedule
- Quality
- Control of Scope + Changes for Budget management
- Maximize use of local firms – including M/WBE participation for TIF Funding

Advantages of Team Colocation
**Schedule**

<table>
<thead>
<tr>
<th>Traditional Approach</th>
<th>Fast Track Schedule</th>
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<tbody>
<tr>
<td>Traditional</td>
<td>Fast Track</td>
</tr>
<tr>
<td>Time Saved</td>
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<td>BP#4</td>
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**Demonstrated Outcomes**

- Fast Track Schedule – occupancy achieved in January, 2012
- Control of Scope + Changes for Budget management – Actual savings of 5.1%
- Maximize use of local firms including M/WBE participation for TIF Funding – achieved goals of 24% MBE and 4% WBE to date

**Lessons Learned**

- Guiding Principles
- PM is the integrator
- Formal team-building works
- Image to quality relationship
- Trust and continuity in core team
- Colocation is vital
- Communication is essential to success

**The Butterfly: Multiple Stories, One Consistent Theme**

- Rush’s version
- Contractor’s version
- Designer’s version
- Planner’s version
- Engineer’s version
The Butterfly: Multiple Stories, One Consistent Theme

Project Manager’s version

Creating an Icon in Chicago

"Personally, I love the Tower. I think that from a patient perspective it is so therapeutic in terms of aesthetics, privacy, quietness, larger bathrooms and the views." Eve Sullivan, MS, RN, NEA-BC, Unit Director 12E, Cardiac/Neurosurgery Unit

"Working so closely together for more than 6 years, it was hard to distinguish the Rush staff from the Power/Jacobs & Perkins/Will staff. We truly worked together as one team with one objective in mind, to complete the project, on time and on budget, while delivering all the elements required to ensure an up-to-date, state-of-the-art, efficient healing environment." Eileen Dwyer, former Director, Office of Transformation

Client and User Testimonials

"The unit is quiet and calm even when we’re at capacity." Patricia Altman, BSN, RN, Unit Director Emergency Department

"Patients and families love the new building. They enjoy the views and quietness on the units." Gia Crisanti, RN, MS, Unit Director 10W, Adult Cardiac Care Unit

Questions & Answers

"The carpeted hallways are more comfortable for nurses’ feet." Jennifer Vinc, MS, RN, Unit Director 13W, Adult Medicine Unit

"The new spaces have enhanced the patient experience in the ED by assuring privacy and comfort." Gino Ramirez, DO, Chairman, Associate Professor, Department of Emergency Medicine