BIM: Present and Future Virtual Technology for Higher Education

April 2015
Agenda

1. Introduction – What is BIM? Who is Lend Lease?
   - Damon Ranieri, BIM Integration Manager – LL
   - Jeannine Eicker, Vice President, Project Executive – LL

2. Case Study on a Community College Campus – CCSF

3. BIM and Benefits to Owners, Architects, Contractors

4. Higher Education Projects for the Future
“Building Information Model is a digital representation of physical and functional characteristics of a facility. As such, it serves as a shared knowledge resource for information about a facility forming a reliable basis for decisions during its life cycle from inception onward.


by Dana K. (Deke) Smith, FAIA - Executive Director, buildingSMART alliance, and Alan Edgar, Chair -National BIM Standard Project Committee
Last updated: 07-24-2008
Building Challenges at Community Colleges

- Community Colleges are faced with limited capital, but are challenged with deferred maintenance and potential renovation obstacles.

- New HVAC & technology systems & equipment = more stuff above the ceiling.

Address design & construction challenges with BIM & Virtual Technology.
Challenges with Building Operations

- New BAS systems require more sophisticated skills from Building Maintenance
- Need for electronic management of as-builts, product data and warranty information once an asset is turned over for operations
- FM use of an electronic database for asset tagging and asset harvesting.

BIM & Virtual technology will help facilities management operate the building
Introduction – Who is Lend Lease?

PRESENCE IN CHICAGO FOR OVER 35 YEARS

NATIONAL PRESENCE

Our work totals in excess of $8.4 Billion and approximately 30 Million square feet.
Case Study – Community College of San Francisco, Chinatown North Beach Campus

Completion
2012

Client
City College of San Francisco

Construction Value
$104 Million

Building Size
Main – 157,000 sf
Annex – 30,000 sf

Assignment
Construction Management @ Risk – GMP

Architects
EHDD, San Francisco
Barcelon and Jang
Case Study
BIM on CCSF

- Extensive **BIM tools** used to:
  - Plan construction logistics
  - Ensure constructability
  - Coordinate design and construction issues
  - Manage through site access, street closures, materials deliveries, safety systems, and construction

- Lend Lease’s 3D documents became a facilities-management tool for maintenance and building operations after construction
Case Study
Live Model Demonstration
Contractors Have Accurate As-built Equipment Info... Use It!

Added Value:
- Time Savings
- Cost Savings
- New Personnel Training
- Visualization & Improved Decision Making
BIM and Benefits to Owners, Architects, Contractors

- Build Twice: once virtually, once physically – and pay once
- Free Value Engineering “gimmies”
- Cuts Down on “Oops” Field Situations
- More Efficient Facility Management
Higher Education Projects for the Future

- Include BIM requirements in RFPs for Architects/Engineers at a minimum for multi-discipline collaboration at design phase

- Include BIM requirements in RFPs for Construction Managers / General Contractors at a minimum for clash detection of MEPFP systems

- Engage Facility Management and discuss future utilization of 3D models for building operations
Thank You