Communicating Site Logistics & Phasing

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#BIMForumED @_Rlawrence, @chappell756
Balfour Beatty Global Presence

Balfour Beatty

In over 80 countries
Over 50,000 employees
Ranked 16th largest global contractor by Engineering News-Record

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Balfour Beatty US Presence

Balfour Beatty

2,500 Employees in the US

Dallas, TX – US Headquarters

Ranked #1 Contractor by Business North Carolina five out of six years

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Carolina’s Market Segments

- Multi-Family Housing
- Commercial
- Education
- Mission Critical
- Healthcare
- Biotechnology

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**PROJECT SOLUTIONS APPROACH**

<table>
<thead>
<tr>
<th>TEAM</th>
<th>SCHEDULE</th>
<th>COST</th>
<th>VALUE</th>
<th>PERFORMANCE</th>
</tr>
</thead>
<tbody>
<tr>
<td>Define Client drivers</td>
<td>Pull integrated schedules</td>
<td>Rapid cost modeling/trending</td>
<td>Knowledge based design</td>
<td>Facility operation planning</td>
</tr>
<tr>
<td>Create high performing team</td>
<td>Design decision planning</td>
<td>Lifecycle cost analysis</td>
<td>Values based decision making</td>
<td>Design for safety and manufacturing</td>
</tr>
<tr>
<td>Continuous mission alignment</td>
<td>Weekly production planning</td>
<td>Incentive based agreements</td>
<td>Collaborative risk management</td>
<td>Built in quality &amp; safety</td>
</tr>
<tr>
<td>Aftercare</td>
<td>Facility management</td>
<td>Energy security</td>
<td>Occupant satisfaction</td>
<td>Performance monitoring</td>
</tr>
</tbody>
</table>

**WHAT IS PROJECT SOLUTIONS?**

A collaborative approach to our internal early game as it relates to estimating, scheduling, VDC and Design management.

*Only use the right tools for the job*

*Result:* **Custom Solutions for the project**
Deliverables = Man Power + Resources = $
Workload - Budget - Profit

- General Workload
- BIM Workload
- BIM Budgets
- Profits

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DIGITAL ASSETS (DELIVERABLES)

Models

- MEP
- ARCH
- CIVIL
- STRUCT

Laser Scans

Drawings/Plans

Jobsite Photos
SITE LOGISTICS & PHASING PLANS ARE DYNAMIC
# LASER SCANS

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Case Study - Bidding Site Logistics

- Civil Cut & Fill Analysis
- Design Models
- Site Logistics Model

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Case Study - Bidding Site Logistics

Construction
Balhour Beaty

Site Logistics Plan - Sequence VII

preliminary supply points

construction accommodation

station road D/1

parking area/trenching area
Case Study - *Interior Upfit Logistics*

- Use of Freight Elevator to bring up Materials
- Remove Exterior Window for drywall and large materials
- Secure Phase 3 Kitchen area on 1st Floor

**PHASE ONE LOGISTICS**
Construction on Floors 1st, 7th – 10th

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Case Study - Logistics & Crane Study

RETAINING WALL AT LATTA ARCADE
Case Study - Logistics & Crane Study

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LOGISTICS
A CRANE 1
B CRANE 2
C CRANE 3
D PERSONNEL + MATERIAL HOIST
E COVERED SIDEWALK
F DUMPSTERS
G RALLY POINT
H TEMPORARY LAYDOWN
I SITE OFFICE IN LATTA
J SITE ENTRY
K FLAG MAN
Case Study - Site Logistics Board

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Case Study - Site Logistics Board

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Case Study - Real-Time Site Logistics
Case Study - Logistics & Phasing Video

Title Slide  Logistics Slide  Work Phasing Slides  Animation

Audio Recordings
https://vimeo.com/114669359