In the Field: What Independent Construction Supervision Means

Carlos Reparaz
Hill provides construction consulting services on some of the most complex projects in the world

- Founded in 1976
- Public Company listed on NYSE,
- Over 4,200 Professionals Worldwide
- Over 110 corporate offices covering +35 countries

Has participated in over 10,000 Projects Assignments with a total Construction Value of over US$500 Billion

“Largest Independent CM Firm in the U.S.”
by ENR 2012

Global Leader in Independent Project Management and Construction Claims
THE BIG PROJECT MANAGEMENT PICTURE

- Project Management
  - Design Mgmnt
  - Project Controls
  - Construction Mgmnt
  - Design team
  - Site supervision QA/QC + HSE

Contractors
THE LEADERSHIP PARADIGM

- Designer
- Site Supervisor
- Project Controls
- Construction Manager
- Project Manager

Technical skill vs Leadership
Construction supervision provides the critical link between project management and skilled workers who perform building tasks

- Gain an experienced team of experts, placed permanently on site, to implement and execute your project effectively and in-line with Project Management Institute guidelines
- Keep your construction project on schedule, reduce technical risks and prevent construction errors through our continuous supervision
- Comply with the relevant building regulations, quality standards and insurance company guidelines
- Ensure all work conforms to the specified technical documentation and the construction permit
- Complete and issue all documents, certificates and declarations correctly
Hill’s supervision services:

- Design supervision
- Compliance with legal requirements
- Monitoring of planning and progress
- Materials and works quality control
- Quality Assurance
- Continuous contractor supervision
- Non-destructive testing supervision
- Delivered documentation supervision
- Technical and legal consulting
- Testing materials, systems and installations
- As-built documentation
- Permanent supervision by experienced professionals
- Inspection, commissioning and site testing
- Safety Supervision
TEAMS WORKING IN TWO OR MORE CITIES

- Cultural gaps
- Language barriers
- Different time zones
- Discontinuous communication
- Excessive emailing
- Incorrect communication turns into frustration
- Misunderstandings escalate into aggressiveness
- Little exposure to client / end user
- No team spirit!
PRE-CONCEIVED IDEAS DRIVE RELATIONSHIPS
TECHNOLOGY WILL NEVER REPLACE EYE CONTACT
WE BUILD PROTOTYPES EACH AND EVERY TIME
DESIGN IS A CONTACT SPORT
GOOD INGREDIENTS ARE BASIC

A) BUSINESS LEVEL

- SPV/ BORROWER
- PUBLIC AUTHORITY
- LENDER
- LENDER’S ADVISOR/ PROJECT MONITOR

B) DELIVERY LEVEL

- CONCEPT DESIGN TEAM
- CONSTRUCTION MANAGER
- PROJECT MANAGER
- DESIGN MANAGER
- CONSTRUCTION SUPERVISION + HSE
- COST MANAGER

C) IMPLEMENTATION LEVEL

- DETAILED DESIGN TEAM
- CONTRACTOR/S
...BUT ALSO HOW YOU MIX THEM
HOW TO EFFECTIVELY MANAGE THE TEAMS?
CLEAR DEFINITION OF OBJECTIVES

Cost

Time  Scope/Standard
CLEAR DESIGN BRIEF (THE TREE SWING)

what marketing suggested  what management approved  what engineers designed

what was manufactured  as contractor built it  what the client really wanted
FRONT-END PLANNING

Opportunity to Minimize Risk

Impact of Risk

Damage limitation zone

DELAYS / COST OVERRUN

TIME

INCEPTION DESIGN CONSTRUCTION HANDOVER OPERATION

Opportunity to Minimize Risk
# CLEAR ROLES AND RESPONSIBILITIES

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>R:</td>
<td>C:</td>
<td>I: Informed of Progress / Status (Formally)</td>
<td>V:</td>
<td>S: Signatory / Approval</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>0</td>
<td>PROJECT MANAGEMENT/ПРОЕКТНОЕ</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>0.1</td>
<td>Overall Management &amp; Administration/Общее</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>0.11</td>
<td>Project Execution Plan/План выполнения проекта</td>
<td>S R C C</td>
<td>C C</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>0.12</td>
<td>General Management Coordination/Кoordination Генерального у правления</td>
<td>I R</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>0.13</td>
<td>Project Scope Definition/Определение масштаба проекта</td>
<td>S R C C</td>
<td>C</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>0.14</td>
<td>Supervision of Sub-Consultants / Проверка Субконсультантов</td>
<td>I V R</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>0.15</td>
<td>Supervision of Sub-Contractors / Проверка Субподрядчиков</td>
<td>I V R</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>0.2</td>
<td>Master Program / Scheduling/Генеральная программа/Графики</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>0.2.1</td>
<td>Master Program/Генеральная программа</td>
<td>S R C C</td>
<td>C C</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>0.2.2</td>
<td>Updated / Statused Master Program/Пересмотр/Статусная Генеральная программа</td>
<td>S R C C</td>
<td>C C</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>0.2.3</td>
<td>Design Schedule During CD / PD / DD / TD Stages/Дизайн графика во время этапов CD / PD / DD / TD</td>
<td>I S C R</td>
<td>C</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>0.2.4</td>
<td>Updated Design Schedule During all Stages/Пересмотр графика дизайн на всех этапах</td>
<td>I S C R</td>
<td>C</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>0.2.5</td>
<td>List of Architectural / Engineering Deliverables//Архитектурный список/Технические доставки</td>
<td>I S C R</td>
<td>C</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>0.2.6</td>
<td>Deliverable Schedule/График доставки</td>
<td>I S C R</td>
<td>C</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>0.2.7</td>
<td>Construction Program/Строительная программа</td>
<td>S V</td>
<td>R</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>0.2.9</td>
<td>Works Completion Program/Завершение работ программы программы процентов</td>
<td>I V C C R</td>
<td>R C C</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>0.2.10</td>
<td>Quality Management Program/Программа у правления качеством</td>
<td>S V C C R</td>
<td>R C C</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>0.2.11</td>
<td>Document Register at the end of Each Stage/Регистрация документов к конце каждого этапа</td>
<td>I S C C C R</td>
<td>C C C</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**R:** Responsible / Prepares  |  **C:** Contributes / Consulted  |  **I:** Informed of Progress / Status (Formally)  |  **V:** Verifies / Reviews  |  **S:** Signatory / Approval
• A still target is easier to hit than a moveable one
• Even realistic plans can change every week
• Avoid over-optimistic “recovery plans”
• Incorporate reviews and client approvals
COMMUNICATION MANAGEMENT

- Communications Protocol
- Responsibility Matrix
- Meetings’ management
- Workshops
- Value Engineering cycles
- Change management
- Client approvals
PM Web is an integrated tool that allows full control of projects, programs and portfolios during development and operation

- Portfolio & program management
- Integration to automate input and output of information between PMWeb and other software such as SAP, PeopleSoft, Oracle, Dynamics and others
- CapEx planning and management, facility management and Real Estate Management tool
- Effectively manage the Plan-Build-Operate life cycle
Risk Analysis

Engineering Forms

Document Management
BIM – BUILDING INFORMATION MODELING
Presentation by an international construction supervision company on what independent supervision means.

1. How to measure and control the quality in construction?
2. What are the practical methods used globally, and which of them are ordered and/or would be necessary also in Latvia?
3. What are the problems in Latvian construction industry from construction supervisor’s perspective? Ensure and control the quality in construction?
4. What are the practical methods used globally, and which of them are ordered and/or would be necessary also in Latvia? What are the problems in Latvian construction industry from construction supervisor’s perspective?
Thank you!

Contact me:

carlosreparaz @hillintl.com