



October 4, 2010

Todd Andrew  
Andrew General Contractors, Inc.  
2301 Mercator Drive  
Orlando, FL 32807

Dear Todd,

Messer Construction Co., in partnership with Clarian Health Partners, would like to thank you for participating in our national research project to study Integrated Project Delivery (IPD). We appreciated your time and willingness to share your experiences with us.

Our research included over 80 thought leaders like you from across the country. We spoke to owners, architects, engineers, other construction managers and general contractors, trade contractors, attorneys, and even Lean hospital consultants. Our research goals were to understand:

- + Potential value of IPD based on actual project results
- + Best IPD practices and implementation strategies from across the industry
- + Market capacity or skill set, to implement IPD

The great news is that the investment has been very worthwhile. We have identified several breakthrough benefits available for owners using IPD – including cost, schedule, and quality advantages while also reducing their risk.

Furthermore, we have captured the industry best practices and strategies in our extensive IPD Implementation Guide. This document will guide Clarian Health Partners to success on their upcoming IPD project.

We wanted to personally thank you for your time and effort to participate in this research and have included as an attachment a brief summary of the work and our findings.

Sincerely,

Two handwritten signatures are shown side-by-side. The signature on the left is for Timothy Steigerwald and the one on the right is for Nick Apanius. Both are written in dark ink.

Timothy Steigerwald  
Executive Vice President

Nick Apanius  
Project Executive

Messer Construction Co.

*Attachments (1)*

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# Research Summary

## *A Research-based Approach to IPD*

The construction industry in the United States has been contemplating a relatively new product delivery method to jump start performance: Integrated Project Delivery (IPD). The American Institute of Architects California Council defines IPD as a project delivery approach that integrates people, systems, business structures and practices into a process that collaboratively harnesses the talents and insights of all participants to reduce waste and optimize efficiency through all phases of design, fabrication and construction.

IPD has several fundamental differences from traditional project delivery methods such as Design-Bid-Build, Agency Construction Management, and Construction Management at Risk. Even Design-Build, which in theory allows for better collaboration, has not embraced these essential concepts of IPD:

- + Early involvement of key project participants
- + Multi-disciplinary teams driving collaborative solutions
- + Shared risk management among IPD team members
- + A multi-party agreement supporting collaboration

As with previous trends, Messer Construction Co. stepped forward and began evaluating IPD in an effort to gauge its potential value for owners. Coincidentally, Donnie Reed from Clarian Health Partners was independently studying IPD, to understand the value it could bring to a health care owner. This synergy led to the creation of a study group which included: Tim Steigerwald from Messer, Donnie Reed from Clarian, Todd Buerger from BSA LifeStructures, a health care design firm, and Mark Voigtmann from Baker & Daniels, an international health care law firm. After initial discussion and review, the group agreed there existed a tremendous value potential to all stakeholders in IPD, and a decision was made to further analyze and understand this new delivery method via an in-depth study.

The goal was to better understand the following:

- + The potential value of IPD based on actual project results
- + The best IPD practices and implementation methods from across the industry
- + The market capacity or skill set, to implement IPD

Funded by Messer Construction Co., **an extensive study was conducted** and included site visits and **interviews with more than 80 businesses and persons from across the United States**. A complete list is provided on the back of this sheet.

What the group discovered were two breakthrough opportunities:

1. Project design and construction costs could be reduced through the synergistic application of IPD principles
2. Integration of Lean Six Sigma planning of operational processes in health care facilities prior to commencing design will allow measurable reduction in long-term building operation costs



Here are two examples that showcase these breakthrough opportunities:

- ✦ Using an IPD delivery method, an owner building an ambulatory surgery clinic realized a 15% savings below the original budget and an 18% savings as it related to their historical benchmark costs. Additionally, the project completed 3 ½ months ahead of schedule allowing the owner to begin generating revenue earlier than planned which resulted in an additional \$1 million above their planned revenue target.
- ✦ An existing Emergency Department implemented lean operations before the construction of a planned facility. By doing this, the average length of stay was reduced by 29% in the existing space. Consequently, the number of additional rooms required in the new space was reduced which saved the hospital \$1.25 million in construction costs.

These examples, along with our other research data, proved to the team that IPD provides the basis for a breakthrough solution to project delivery.

Consequently, Messer has produced an IPD Implementation Guide based on the best ideas, proven processes and the local market capacity to deliver these results using this project delivery model.

This implementation plan covers the following areas:

- ✦ Assembling the Project Team – presents information about team structure, team selection process, and agreement form considerations
- ✦ Establishing Project Goals – presents information about creating project goals, aligning goals across the project team, and measuring performance against these goals
- ✦ Implementing Strategies – presents multiple strategies for achieving maximum results during the planning, design, and construction processes. Outlines a process for continual improvement during the entire project cycle
- ✦ Validating Performance – summarizes the steps presented in earlier sections that are required to validate project performance prior to and after occupancy

## Research participants

### Owners

Akron Childrens Hospital  
Autodesk  
BJC Healthcare  
Cedars-Sinai Medical Center  
Cleveland Clinic  
Crate & Barrel  
Fidelity Investments  
St. Elizabeth Healthcare  
Sutter Health  
Trinity Health  
Universal Health Services  
Walt Disney Imagineering  
Xavier University

### Consultants

Joan Wellman and Associates  
KLMK Group  
Lean Project Consulting, Inc  
Learning Systems, Inc.  
RTM Consultants, Inc  
Simpler Consulting, LP  
ValuMetrix Services

### Designers

Array Architects  
BHDP Architecture  
Biagi, Chance, Cummins, London,  
Titzer  
BSA LifeStructures  
Capital Engineering Consultants, Inc  
CH2M Hill  
Champlin Architecture  
Earl Swensson Associates, Inc  
Francis Cauffman Architects  
Ghafari & Associates Inc  
glaserworks  
Gresham Smith & Partners  
HKS, Inc  
HOK  
Kohrs Lonnemann Heil Engineers,  
PSC  
Mussett Nicholas & Associates Inc  
Peninsula Engineering Incorporated  
Ratio Architects Inc  
SmithGroup  
Synthesis Incorporated  
THP Limited Inc

### Contractors

Andrew General Contractors, Inc  
Baker Concrete Construction  
BMW Group, Inc  
Bright Sheet Metal  
Chapel Electric Co., LLC  
Concord Fire Protection, Inc  
Dalmatian Fire, Inc  
DECO Associates, Inc  
Denier Electric Co., Inc  
EMCOR Group Inc  
ERMCO  
ESI Electrical Contractors  
Gaylor  
Grote Enterprises  
Herrero Contractors, Inc  
Integrated Project Delivery  
Jacobs Engineering Group Inc  
Mortenson Construction  
North Mechanical Contracting, Inc  
Norwood Hardware  
Peck Hannaford + Briggs

Satterfield & Pontikes Construction,  
Inc  
Territo Electric, Inc  
The Nelson Stark Company  
The Weitz Company  
Tocci Building Corporation  
TP Mechanical Contractors  
Valley Interior Systems Inc  
Viox Services  
Westbrook Service Corporation

### Others

Aconex  
Baker & Daniels  
buildingSMART Alliance  
Construction User Roundtable  
Dressman Benzinger LaVelle  
Jones Lange LaSalle  
Lean Construction Institute  
Lean Enterprise Institute  
McDonough, Holland & Allen  
National Diversity Solutions  
Stangate Management, Inc  
Xavier University – Department of  
Health Services Administration