

Construction Industry Integrated Delivery System Interest Indicator Questionnaire

Construction Entity Background Information

1. General Contractor/ Construction Entity Name
2. Geographic Location of Corporate Headquarters
3. What region of the country are most of your construction projects?
(Please Check all that apply)
4. Your company is known for specific projects that it provides to the construction industry. What do you consider your primary market focus to be? (Please Indicate all that apply to your organization)



[Centex Construction Corporation-\(Atlantic Region\)](#)
[Dallas, TX](#)

- International
- Northeast [MA (New England), CT, NY, NJ, PA, MD, DC, etc]
- Midwest [IL, IN, MN, MI, OH, WV, IA, WI, KY, etc]
- South [VA, NC, SC, GA, FL, TX, LA, MS, AL, OH, TN, etc]
- West [WA, CA, AZ, OR, CO, UT, ID, etc.]

- New Construction- Retail/ Commercial
- New Construction- Federal-Public, Institutional, Gov't work
- New Construction- Educational (K-12, Higher Learning)
- New Construction- Convention/ Civic/ Cultural
- New Construction- Healthcare
- New Construction- Recreational/ Sports Facility
- New Construction- Heavy Industrial (Shipping Depot(s)/ Power Plants/ Factories)
- New Construction- Civil/ Infrastructure (FHA/ FAA/ FRA Work)

Project Delivery Management

Project Delivery System(s) Summary

- (TD) - *Traditional Delivery Method consist of an Owner, A/E Professional and General Contractor. Arrangement follows a DBB – Design-Bid-Build Scenario. Owner entity holds separate contract with A/E Professional and General Contractor. Vertical information flow occurs between owner to separate entities without cross conversation between A/E and GC. Design Firm has the responsibility of selecting capable consultants, design oversee & production, cost estimate production, construction and specification documentation. When all items are completed general contractors are issued a complete set of project documents to bid, which typically results in the contract being awarded to the lowest bidder. Owner level of experience moderate to high.*
- (DB) - *Design Build consists of an Owner w/ master designer and Design-Build Firm. Master Designer will produce a set of preliminary prints which will serve as the core design and basic project requirements. A contract is held with the owner and a single firm entity with design and construction capacities. The Design Build firm utilizes in-house architecture department or hires design consultant to produce complete set of drawings and design*

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documents. *Guaranteed Maximum Price (GMP)* is established based on finished documents, which is agreed to by owner. Design and Construction are housed in the same entity and provides for construction overlap. Owner level of experience minimal, level of project aggression is substantial.

(MP) - *Multiple Prime Arrangement or Construction Management Agency* Owner holds contracts with all prime contractors. Typically used for phase and fast-tracking construction. The role of the Construction Management firm is that of a consultant of risk reduction and sequencing. CM is not essential to this PDS. For arrangements which employ the use of a construction manager, the construction manager acts as the owners representative in coordination issues although no contract is held between the CM/ CMA the prime contractors and all design professions.

(CMR)- *The Construction Manager @ Risk Delivery system is closely related to the Design Build Method with the three follow aspects:*

1. *Construction Manager is hired with the goal and responsibility of managing the construction project and subcontractor selection*
2. *Cross coordination between the construction manager and the design professional for provision of overlapping in design and construction phases, constructability review occurs during the design phase*
3. *Construction Manager assumes the responsibility for project estimates, cost controls “risk-management” and GMP.*

Integrated Delivery Systems-Design Build Operate Maintain (DBOM) = Design Build Operate (DBO)/ Build Operate Transfer (BOT) + Facilities Management and Maintenance Services

1. What Project Delivery Method PDM(s) has your company used in the past to complete construction projects? Please use the table below to indicate “split of delivery method” via percentage?

Percentage Split		Project Delivery Method	Level of Success with Project Delivery Method (All owner and company goals sustained through project)
10%	100%	Traditional (TD)/ Design Bid Build (DBB)	<input type="checkbox"/> 0%-20% <input type="checkbox"/> 20%-40% <input type="checkbox"/> 40%-60% <input checked="" type="checkbox"/> 60%-80% <input type="checkbox"/> 80%-100%
60%	100%	Design Build (DB)	<input type="checkbox"/> 0%-20% <input type="checkbox"/> 20%-40% <input type="checkbox"/> 40%-60% <input type="checkbox"/> 60%-80% <input checked="" type="checkbox"/> 80%-100%
10%	100%	Design Build Operate (DBO)/ Build Operate Transfer (BOT) <i>Integrated Delivery Method</i>	<input type="checkbox"/> 0%-20% <input type="checkbox"/> 20%-40% <input type="checkbox"/> 40%-60% <input type="checkbox"/> 60%-80% <input checked="" type="checkbox"/> 80%-100%
0%	100%	Multiple Prime (MP)/ CM Agency (CM)	<input type="checkbox"/> 0%-20% <input type="checkbox"/> 20%-40% <input type="checkbox"/> 40%-60% <input type="checkbox"/> 60%-80% <input type="checkbox"/> 80%-100%
20%	100%	Construction Manager @ Risk (CM@ Risk)	<input type="checkbox"/> 0%-20% <input type="checkbox"/> 20%-40% <input type="checkbox"/> 40%-60% <input type="checkbox"/> 60%-80% <input checked="" type="checkbox"/> 80%-100%
0%	0%	Integrated Delivery Method (DBOM)	<input style="color: red;" type="checkbox"/> 0%-20% <input style="color: red;" type="checkbox"/> 20%-40% <input style="color: red;" type="checkbox"/> 40%-60% <input style="color: red;" type="checkbox"/> 60%-80% <input style="color: red;" type="checkbox"/> 80%-100%

2. What is your primary market focus and repetitive customer base?

Market Focus:

Centex primary market focus is geared toward three sectors:

-  **FDA-Federal Drug & Food Administration / Federal Office Building Construction**
-  **Commercial Office Construction**
-  **Condominiums/ Residential**

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Repetitive Customer Project Base: (i.e. Hospitals, Schools, Sports Facilities, etc.):

65% of the commercial construction & development sector for Centex-Atlantic is attributed to repetitive clients. Projects include a large amount of federal work, commercial and banking corporations (Bank of America) and university-wide construction (Triangle-Triad Area –Raleigh-Chapel Hill-Durham).

3. Has your company ever completed Sports Recreational Facilities or Convention Centers? If so please indicate below.

Yes, Centex Rooney (a subsidiary of Centex Construction) has built several convention centers in Florida. The FCAE-(Florida Center of Arts & Education-University of Central Florida in Orlando), the Times Union Center of Performing Arts (Jacksonville, FL) and the Tampa Bay Performing Arts Center (Tampa, FL) project delivery systems were CM@Risk.

4. What are (3) of your companies highest profile projects that you have recently concluded? Please indicate (1) Project Type, (2) Project Size, (3) Project Cost, (4) Project Delivery Method and (5) Cost Analysis and Reporting Method.

<i>Project Type/ Project Name</i>	<i>Project Size (SF)</i>	<i>\$ Project Cost</i>	<i>Project Delivery Method (PDM) /Contract Type</i>	<i>Cost Analysis and Reporting Method</i>
<i>NIH-National Institute of Health</i>	<i>1,200,000</i>	<i>\$ 413,000,000</i>	<i>CM@Risk/Requested</i>	<i>IRIS Doc (Electronic Cost Reporting)</i>
<i>Dulles Airport Terminal</i>	<i>356,000</i>	<i>\$ 29,000,000</i>	<i>Traditional Method/ Requested</i>	<i>IRIS Doc (Electronic Cost Reporting)</i>
<i>Defense Tech</i>	<i>325,000</i>	<i>\$ 17,000,000</i>	<i>Traditional Method/ Requested</i>	<i>IRIS Doc (Electronic Cost Reporting)</i>

5. What are (3) lessons learned from one of your high profile projects listed in the table above? (Lessons pertaining to either owner/ contractor coordination/ payment application submittals or contract structures)

Lesson/ Recommendation #1 (PM-Project Specific Information)-NIH Project

Information has to be obtained from project source: Bevin Mace-bmace@centexconstruction.com

Major obstacles of any Hospital project are low lying activities and activities with quick phasing requirements. These activities can have a substantial impact on the deadline of a hospital project.

- ✚ Phasing design/ development and construction can reduce the project duration in addition to gauging the market*
- ✚ Technologies can change during construction; make sure that you are up to date on all technological advancements*
- ✚ Program process management based on clients needs*
- ✚ If vertical coordination is required for a tight area, more than likely in wall coordination should be addressed, although not specified*

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Lesson/ Recommendation #2 (PM-Project Specific Information)-NIH Project

Information has to be obtained from project source: Bevin Mace-bmace@centexconstruction.com

- ✚ *Setup contractual terms upfront when address structure of contract*
- ✚ *Design airflow requirements should be worked from general view as opposed to ‘outside – in’*
- ✚ *Make sure project has changing requirements that can be supplied*

Lesson/ Recommendation #3 (PM-Project Specific)-NIH Project

Information has to be obtained from project source: Bevin Mace-bmace@centexconstruction.com

Information Flow:

- ✚ *Prioritize information flow for subcontractors. Take an active role in becoming the disseminator to all sub contractors. Medical gas coordination for hospitals can be an intensive scope of the project. Schedule coordination “Bottom-Up versus Top-Down”*

Evolving Design:

- ✚ *Implement evolving design into completion date. Make sure that development and owner understands the process approach to significant coordination issues for medical systems*

6. Based on “project autopsies” for the projects that you have completed what changes or complaints (if any) would you indicate in the selected Project Delivery Method (PDM)? *Please give an example of one of your projects.*

PDM used on one of your completed projects: Information has to be obtained from project source: Bevin Mace-bmace@centexconstruction.com

CM @ Risk

Complaints regarding selected PDM: Information has to be obtained from project source: Bevin Mace-bmace@centexconstruction.com

An existing delivery system was used for the job that Centex has taken over from previous GC. The previous PDS used was CM @ Risk

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Recommended PDM that should have been used: Information has to be obtained from project source: Bevin Mace-bmace@centexconstruction.com
CM @ Risk

7. What additional services have any of your clients required or requested your organization assistance on beyond the scope of schedule, construction and coordination?

<i>Centex Services Provided to Client</i>			
<i>Construction Management @ Risk</i>	<i>Design Build Services</i>	<i>Comprehensive Healthcare Construction Services: (1) Program Management/ Facility Development (2) Medical Equipment Planning and Procurement (3) Strategic Capital Equipment Planning</i>	<i>CCIP-Contractor Controlled Insurance Program</i>
<i>Construction Management Agency</i>	<i>Cost Consulting</i>		<i>OCIP-Owner Controlled Insurance Program</i>
<i>General Contracting</i>	<i>Schedule Services</i>	<i>Pre-Construction Services</i>	<i>IDIQ/JOC-Indefinite Delivery-Quantity/ Job Order Contracting</i>

Beyond the services provided in the table above, Centex Construction offers clients:

- ✦ (3D/4D) CAD modeling*
- ✦ News progression updates as a service to adjacent property owners and multiple clients for projects*

Integrated Delivery Systems

1. How familiar is your organization with the concepts of integrated delivery systems such as ‘Design Build Operate (DBO)’ and ‘Build Operate Transfer (BOT)’?

Centex Construction Corporation uses a similar integrated delivery systems for federal and institutional work, however additional information will have to be obtain for the PPEA-Public/Private Education Act = Choosing partners for building and facilities operations while assuming all consultative duties for a client.

- No Interest
- Not Familiar (Interested in obtaining information)
- Limited Knowledge of Concepts (Interested in obtaining additional information)
- Actively seeking or requesting information (Interested in exploring the possibility of using Integrated Delivery Systems)
- Very Familiar (Have worked with integrated delivery systems before, first hand experience)

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2. Has a client/ potential client ever requested your organization to utilize integrated delivery systems for a project? If so please describe the situation and arrangement.

Information has to be obtained from project source (PPEA contact): David Birtwistle-dbirtwistle@centexconstruction.com

Re-iterated from question (1) PPEA-P3 used for Herdon Township as construction services procurement method

PPEA gives the entity the freedom of selecting project team members, developers and designers.

PPEA also grants choice of selecting the most appropriate PDS

3. What questions/ concerns and issues would have to be resolved prior to your organization using integrated delivery systems? If your organization has utilized integrated delivery systems please list the issues and concerns you've had prior to pursuing projects which required this arrangement.

Information has to be obtained from project source (PPEA contact): David Birtwistle-dbirtwistle@centexconstruction.com

Various concerns include:

- (1) The Level of project complexity***
- (2) Project Size***
- (3) Project Shape***
- (4) Project Use***
- (5) Project Feasibility/ can method be applied to multiple projects***

State and Government laws are always a concern when evaluating this method; each jurisdiction is different and should be evaluated as part of a feasibility assessment.

4. For organizations which have used integrated delivery systems, what are some of the benefits to your organization for pursuing projects which require/ request or use this project delivery method?

Information has to be obtained from project source (PPEA contact): David Birtwistle-dbirtwistle@centexconstruction.com

Benefits of PPEA

- (1) Control in Choosing Partners***
- (2) Control in Procurement Cycle***
- (3) Control in Value Engineering and Project Design***
- (4) Control in Cost Controls***

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Any information obtained during this interview will be used strictly and solely for the purpose of research. Any feedback is greatly appreciated. Thank you for taking time to participate in this interview.

*Sincerely,
Arnon L. Bazemore
PSU Architectural Engineering-Construction Management Student*