Time to Build!
What to Expect On Your Upcoming Design and Construction Journey
Christopher is an award-winning architect with more than 20 years of diversified architectural experience in design of projects from concept to bid. Chris leads owner design charrettes, creates building site schemes and floor plan options and manages production of well coordinated construction documents. He is responsible for ensuring cohesion for all design-build team members on a project. He is dedicated to providing exceptional client service while delivering thoughtful and affordable designs.

Charlie has been dedicated to the A/E/C industry for more than 19 years. Throughout his career, he has helped countless owners realize the benefits of integrated project delivery. Upon project award, he maintains a high level of client interaction to ensure satisfaction with the project. A long-time advocate for the best practices in procurement and delivery for collaborative projects, Charlie uses his role as a Division Leader to build strong teams and to foster collaboration and trust between the selected designer and builder.
You’ve Met Your Goals
Now What?
The Six Stages of A Project

1. Pre-Design Planning
2. Schematic Design
3. Design Development
4. Construction Documents
5. Construction Administration
6. Closeout and Occupancy
Step 1: Pre-Planning Design

Selection of Delivery Method

Design Bid Build
Construction Management at Risk
Design Build
Project Delivery

Project Delivery is a comprehensive process including planning, design and construction required to execute and complete a building facility or other type of project. Choosing a project delivery method is one of the fundamental decisions owners make while developing their acquisition strategy.

<table>
<thead>
<tr>
<th>Project Delivery Systems</th>
<th>Procurement Methods</th>
<th>Contract Formats</th>
</tr>
</thead>
<tbody>
<tr>
<td>Construction Management at Risk (CMR) also known as CM/GC</td>
<td>Best Value (BVS)</td>
<td>Cost Plus Fee</td>
</tr>
<tr>
<td>Design-Bid-Build (DBB)</td>
<td>Low Bid</td>
<td>Guaranteed Maximum Price (GMP)</td>
</tr>
<tr>
<td>Design-Build (DB)</td>
<td>Negotiated</td>
<td>Lump Sum or Fixed Price</td>
</tr>
<tr>
<td>Multi-Prime (MP)</td>
<td>Qualifications-Based (QBS)</td>
<td>Target Price</td>
</tr>
<tr>
<td></td>
<td>Sole Source or Direct Select</td>
<td>Unit Price</td>
</tr>
</tbody>
</table>
Construction Management at Risk

- Commitment from CMAR firm for Schedule and Price
- Either Lump Sum or Guaranteed Maximum Price (GMP)
- CMAR Provides Input During Design
No Input from Construction Firm During Design

Lump Sum Bid

Knowledge of Price Later in Project Cycle
Design-Build

- One Contract for Both Design and Construction
- Earliest Knowledge of Costs
- DB Responsible for Design Errors and Omissions
Construction Management at Risk

Key Considerations

- The owner gains the benefit of having the opportunity to incorporate contractor's perspective and input to planning and design decisions:
  - More professional relationship with contractor
  - Earlier knowledge of costs
  - Earlier involvement of constructor expertise
- Places the owner between designer and contractor for resolution of project issues
  - Completeness of design
  - Coordination - impact to schedule and budget

- Two separate contracts
- Owner warrants the sufficiency for the plans and specs
- Owner is liable for any "gaps" between plans and specs
Design Bid Build

Key Considerations

- Longer duration since all design work must be completed prior to solicitation of GC bids
- Absence of construction input may limit the constructability of the design
- Owner generally faces exposure to contractor change orders and claims over design and constructability issues

- Two separate contracts
- Owner warrants the design and liable for any “gaps”
- Contractor is responsible to build the project as designed
Key Considerations

- Cost efficiencies achieved with contractor and designer working together
  - Fewer changes, claims and litigation
  - Earlier knowledge of firm costs
  - Change orders typically limited to owner changes
- DB can deliver a project more quickly than CMAR and DBB
- Owner willing to place emphasis on qualifications of the team
  - Qualification selection - Negotiate (fastest)
  - Qualification, Approach, Fixed Fees (faster)
  - Qualification and Technical Price (fast)
Choosing the Best Method
Summary of Owner Considerations:

**Owner Control**
- Desire to control design details
- Desire to control project outcome
- Desire to have control of all prime contractors
- Desire to empower more innovative project solutions
- Desire for design excellence

**Owner Relationships**
- Desire to have direct relationship with designer
- Willingness to establish a more professional relationship with contractor
- Desire to avoid adversarial relationships
- Ability to enhance project coordination
- Ability to reduce project claims
- Desire to integrate the voice of the contractor in the planning process

**Project Budget**
- Adversity to change orders
- Need to establish budget at earliest possibility
- Best value for funds invested

**Project Schedule**
- Timing to establish definitive project scope
- Timing to establish definitive construction cost
- Ability to fast track a project
- Total project duration
- Desire to avoid delays due to disputes or claims

**Owner Risk**
- Adversity to change orders
- Owners ability to make timely key decisions
- Ability to reduce gaps between services
- Liability for success or failure of the design

Can be accomplished using Design-Build

Pre-Design Planning  Schematic Design  Design Development  Construction Documents  Construction Administration  Occupancy
Step 1: Pre-Planning Design

Selection of Delivery Method
- Design Bid Build
- Construction Management at Risk
- Design Build

Stakeholder Input and Buy-In
- Capture and Memorialize It

Program Verification
How the customer explained it

How the Project Leader understood it

How the Analyst designed it

How the Programmer wrote it

How the Business Consultant described it

How the project was documented

What operations were installed

How the customer was billed

How it was supported

What the customer really needed
5.22.15 Program
20,091 sq. ft.
• Welcome Center
• Admissions
• Bookstore (No Café)
• Office of the President
Step 2: Schematic Design

Design Team Activities

- 30% Design Documents
- Geotech Survey
- Floor Plans
- Written Narratives (Become Specs)
- Civil Documents at 60%
- Preliminary Permit Discussion
Step 2: Schematic Design
Preconstruction Activities

- Preliminary/ROM Budget
- Preliminary Schedule
- Value Engineering and Alternatives
- Coordination of Design, Permits and Construction
### Alternative Analysis During Schematic Design Development

<table>
<thead>
<tr>
<th>Deliverables</th>
<th>Total</th>
<th>Building SF</th>
<th>Price / SF</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>RFP</td>
<td>$21,000,000</td>
<td>85,000</td>
<td>$247.06</td>
<td>1. P&amp;P Bond Included</td>
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<tr>
<td>1st Estimate</td>
<td>$21,505,751.751</td>
<td>89,000</td>
<td>$241.64</td>
<td>1. P&amp;P Bond Included</td>
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<tr>
<td>3rd Estimate</td>
<td>$18,243,054</td>
<td>65,000</td>
<td>$280.66</td>
<td>1. No P&amp;P Bond 2. Reduced to 65,000 SF</td>
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<tr>
<td>4th Estimate</td>
<td>$19,452,809</td>
<td>65,000</td>
<td>$299.27</td>
<td>1. No P&amp;P Bond 2. Include Davis Bacon 3. Upgrade structure for future metro offices 4. Added track and stairs 5. Added sauna and steam rooms</td>
</tr>
<tr>
<td>6th Estimate</td>
<td>$18,427,455</td>
<td>69,000</td>
<td>$267.06</td>
<td>1. P&amp;P Bond 2. Scope creep (see VE clarification sheet for details) 3. Fire rating impact in structure and design</td>
</tr>
<tr>
<td>GMP</td>
<td>$18,906,129</td>
<td>69,000</td>
<td>$274.00</td>
<td>1. No P&amp;P Bond</td>
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<tr>
<td>GMP w/VE</td>
<td>$17,852,809</td>
<td>69,000</td>
<td>$258.74</td>
<td>1. No P&amp;P Bond 2. See list of VE on summary</td>
</tr>
</tbody>
</table>
Step 3: Design Development
Design Team Activities

- 60% Design Documents
- Creating Major Scopes from Narratives
- Civil Documents at 90%
- Civil Documents Submitted for Permit
Step 3: Design Development
Preconstruction Activities

- Open Book GMP
- Guaranteed Schedule Completion
## GMP Development Process

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<tr>
<th>Step</th>
<th>Description</th>
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<td>Step 1</td>
<td>Establish trade level bid categories</td>
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<td>Step 2</td>
<td>Advertise and issue RFQ</td>
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<td>Step 6</td>
<td>Prepare GMP utilizing best value pre-approved vendor</td>
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<td>Step 7</td>
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Step 4: Construction Documents

- 100% Design Documents for Permit Issue
- Specs from Written Narratives
- Civil Permit Comments
Step 5: Construction Administration

- Mobilization – “Ground breaking”
- On-site Construction Staff
- Quality Control Plan
- A/E Submittal Review
- Requests for Information - RFI
- Preconstruction Meetings
- First Work in Place Observations
- Weekly Owner Meetings
Mock Ups and Work In Place Inspections
Month 2
Month 3

Pre-Design Planning
Schematic Design
Design Development
Construction Documents
Construction Administration
Occupancy
Month 5
Month 6
Month 7
Month 8
Step 6: Closeout and Occupancy

- Final Punchlist
- Owner Training
- Certificate of Occupancy
- Move In – “Ribbon Cutting”
- 11-Month Post Occupancy
Current Market Trends

◆ Market is “Hot” - Growth in Revenue exceeds Resources
  ◆ Back to back years of 9% growth*
◆ Tariffs and Material Cost Escalations
  ◆ 7.4% increase in 1 year**
◆ Subcontractor “Seller’s Market”
  ◆ Pre recession field trade gap is larger
  ◆ Volume of work up – “selective”
  ◆ Profit margins have increased

*Engineering News Record May 2018
**Association General Contractors October 2018
Questions?
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Charlie.Rocheleau@Haskell.com
The Six Stages of A Project

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Open Book Guaranteed Maximum Price

**Step 1 | Establish Trade Level Bid Categories**
Haskell reviews the design and divides the project into specific bid categories at the trade level. This allows Haskell to receive proposals directly from the individual firms performing the work, and prevents any double mark-up within the subcontracting community. This approach leads to the most competitive subcontractor pricing, and also allows for bid categories and opportunities suited for local subcontractors.

**Step 2 | Advertise and Issue Requests for Qualifications**
Haskell will advertise to establish open communication lines with subcontractors and encourage local participation. As part of the notice, we will request SOQs from subcontractors by individual bid category. To facilitate this process, the team will use a Vendor Qualification Form (VQF) and Subcontractor Risk Evaluation (SRE) for interested subcontractors.

**Step 3 | Review Vendor Qualifications and Establish a List of Approved Vendors per Bid Category**
Haskell will review completed VQFs submitted by subcontractors and establish the list of qualified vendors per bid category. The client will be invited to participate in the process and can disqualify vendors based on past experience or other factors such as MBE classifications.

**Step 4 | Conduct Bid Opening and Receive Bids**
Haskell will advertise and bid out all subcontractors. Price proposals from pre-qualified vendors for individual bid categories will be received by Haskell with you or your advisor in attendance. Following the bid review process, Haskell will create a bid tabulation and analysis summary to review with you and/or your advisor. This will allow for the most transparency and ultimately ensure you receive the best value for each and every bid category.

**Step 5 | Prepare GMP Utilizing Pre-Approved Subcontractors Representing Best Value**
After meeting with the apparent low bidder in each bid category to confirm scope, schedule, quality, safety and price, Haskell will prepare the GMP using the cost of self-performance or the subcontractor deemed by the client to deliver the best overall value for each bid category.

**Step 6 | Present GMP in Open Book Manner to Client**
To submit the GMP to our client, Haskell will assemble all pricing and product information in a three ring binder with all supporting documents. Supporting documents include all pricing documents, such as self-performance cost, subcontractor quotes, including design-related costs, material quotes, general conditions, bonds and insurance, and fees.