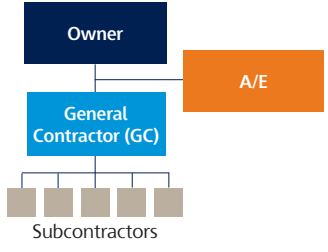
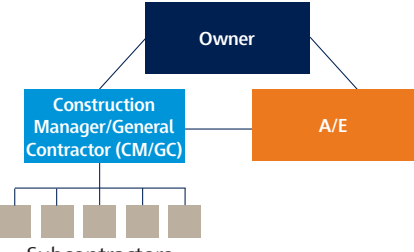
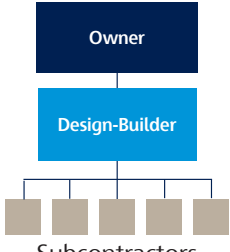


## Matrix of Project Delivery Methods

<b>Contractual Organization</b>			
<b>Industry Term</b>	<b>Hard Bid Lump Sum or Stipulated Sum</b>	<b>Construction Manager General Contractor (CM/GC)</b>	<b>Design-Build</b>
<b>Definition</b>	<p>Owner selects an architect/engineer to begin and develop construction documents from which the owner solicits lump sum bids. Selection is based on the lowest responsible bid.</p>	<p>Construction Manager/General Contractor (CM/GC) provides assistance in evaluating costs, schedule, alternative design recommendations and systems and materials through design phase. CM/GC guarantees maximum price before construction, convertible to lump sum, GMP or cost plus, then completes construction, assuming the risk for any overages. Selection is based on criteria that combines qualifications and experience.</p>	<p>A single entity is contracted to provide both design and construction. The design-build team consists of contractor, architect/engineer. The design-builder contracts directly with the architect and subcontractors and is responsible for delivery of the project. Selection is based on the proposer offering the best value to the owner.</p>
<b>Pros</b>	<ul style="list-style-type: none"> <li>▪ Familiar delivery method</li> <li>▪ Defined project scope</li> <li>▪ Single point of responsibility</li> <li>▪ Competitive bidding</li> <li>▪ Cost and schedule based on scope</li> <li>▪ CM assumes risk for subcontractors</li> </ul>	<ul style="list-style-type: none"> <li>▪ Selection flexibility</li> <li>▪ Design phase assistance</li> <li>▪ Single point of responsibility</li> <li>▪ Team Concept</li> <li>▪ Faster schedule delivery than traditional</li> <li>▪ Change flexibility</li> <li>▪ Innovative solutions</li> <li>▪ Value management during preconstruction</li> <li>▪ CM/GC is at risk for schedule and guaranteed maximum price (if GMP)</li> <li>▪ CM/GC assumes risk for subcontractors</li> </ul>	<ul style="list-style-type: none"> <li>▪ Selection flexibility</li> <li>▪ Single point of responsibility for design and construction</li> <li>▪ Faster schedule delivery</li> <li>▪ Team concept</li> <li>▪ CM assumes risk for design and subcontractors</li> </ul>
<b>Cons</b>	<ul style="list-style-type: none"> <li>▪ No design phase assistance</li> <li>▪ Bid scenario tends to result in change orders to bring final cost to actual cost to complete</li> <li>▪ Contractor keeps all savings</li> <li>▪ Construction generally begins at 100% Construction Documents</li> <li>▪ Lack of change flexibility</li> </ul>	<ul style="list-style-type: none"> <li>▪ Limited number of qualified construction managers having proven systems and preconstruction services in place</li> <li>▪ Focus on cost of construction elements without fully capturing the savings available</li> </ul>	<ul style="list-style-type: none"> <li>▪ Fear of no checks and balances</li> <li>▪ Lack of design control</li> <li>▪ Lack of control on material selection</li> </ul>
<b>Best Suited</b>	<p>New projects that are not schedule sensitive nor subject to potential change</p>	<p>Larger more complex phased renovations</p>	<p>New projects that are schedule sensitive and owners' needs and expectations are well defined</p>
<b>Least Suited</b>	<p>Complex projects that are sequence or schedule sensitive. Projects subject to change through construction phase.</p>	<p>Smaller, well defined projects and \$1 million in value or less</p>	<p>Complex renovations and/or projects that are difficult to define and less schedule sensitive</p>