DFCM

CONSTRUCTION DELIVERY METHODS
A GUIDE FOR LEAS

Matt Boyer
Deputy Division Director
Division of Facilities Construction & Management
mboyer@utah.gov

THREE WAYS TO DELIVER A PROJECT

DESIGN-BID-BUILD
sequential

The owner hires a designer to finish the plans, then selects a contractor through competitive bidding to build them.

2 separate contracts

DESIGN-BUILD
integrated

The owner contracts with one team that is responsible for both designing and constructing the project.

1 combined contract

CM/GC
collaborative

Construction Manager / General Contractor. The contractor joins during design to advise on cost and schedule, then builds under a negotiated price.

2 contracts, early CM/GC

HOW OWNERS COMPARE METHODS

COST CERTAINTY

How early the price is known and how firm it is

SCHEDULE

Time from concept to occupancy

DESIGN CONTROL

The owner's say in design, materials, and quality

RISK ALLOCATION

Who carries design, cost, and schedule risk

COLLABORATION

How early owner, designer, and builder work together

OWNER EFFORT

Staff time and expertise needed to manage the project

DESIGN-BID-BUILD
MECHANICS

PROCESS

1. **DESIGN** – Owner hires an architect or engineer to complete plans and specifications
2. **BID** – Contractors price the finished documents in open competition
3. **AWARD** – The lowest responsive, responsible bidder receives the contract
4. **BUILD** – Contractor builds to the documents while the designer administers the contract

2 CONTRACTS

Owner-Designer & Owner-Contractor

VBS or Low Bid

Typical selection basis

Lump Sum

Price fixed by the winning bid on complete documents

DESIGN-BID-BUILD
DEMANDS ON THE OWNER

1 Schedule duration

Design must be completed before bidding, so the schedule has to absorb sequential phases (design, bid, award, construction).

2 Willingness to take on design-error & omission risk

The owner holds an implied warranty of the plans and specs, so gaps, conflicts, and omissions become the owner's change-order exposure.

3 Capacity to manage two contracts

The owner needs to coordinate the designer and the contractor and referee between them.

4 Budget flexibility or contingency

Cost certainty arrives only at bid, and if bids come in high, the owner must redesign, add funds, or cut scope.

DESIGN-BID-BUILD
DEMANDS ON THE OWNER

5 Qualified in-house or hired oversight

Someone must review design deliverables, administer bidding, and manage change orders and RFIs.

6 Acceptance of an adversarial dynamic

The contractor is selected on price and is not involved in design, so the owner should be prepared to manage claims and change-order pressure.

7 Tolerance for limited contractor input

Constructability, phasing, and cost feedback usually arrive too late to influence design.

DESIGN-BID-BUILD
PROS & CONS

BENEFITS

PROVEN AND FAMILIAR - Well-established contracts and processes everyone understands.

PRICE COMPETITION - Open bidding on complete documents yields a transparent, market-tested and often lowest price.

FULL DESIGN CONTROL - The owner directs the designer and finalizes design before construction.

CLEAR ROLES - A separate designer and builder provide natural checks and balances.

PUBLIC-SECTOR FRIENDLY - Often required or favored for public work because of its fairness.

DRAWBACKS

LONGEST SCHEDULE - Construction cannot start until design and bidding are complete.

LATE BUILDER INPUT - Cost and constructability issues surface when changes are expensive.

ADVERSARIAL CLIMATE - Gaps in plans can drive change orders, disputes, and claims.

LOW-BID RISK - Selecting on price alone can bring quality or capability concerns.

OWNER HOLDS DESIGN RISK - The owner carries design errors and coordination between parties.

DESIGN-BUILD MECHANICS

PROCESS

1. **DEFINE** – Owner sets scope, budget, and performance criteria
2. **SELECT** – Design-build teams compete on qualifications, price, and deliverables
3. **DESIGN + BUILD** – Design and construction overlap under one contract
4. **DELIVER** – One team closes out and turns over the completed project

1 CONTRACT

Single contract covering both design and construction

Good Value

Selection weighs qualifications as well as price and deliverables

Lump Sum or GMP

Lump sum or Guaranteed Maximum Price, set early

DESIGN-BUILD
DEMANDS ON THE OWNER

1 Ability to write a strong performance-based program

The owner must define needs clearly in an RFP or Owner's Project Requirements without designing the building. This is often the most underestimated requirement.

2 Early, firm decisions

Scope and key requirements must be settled before award, since later owner-driven changes will require change order pricing.

3 Willingness to relinquish design control

The owner gives up detailed design control in exchange for a single point of responsibility, so they must accept the team's solutions if they meet the criteria.

4 A fast, disciplined decision-making process

Reviews, approvals, and funding decisions need to be quick, or the schedule benefits disappear.

DESIGN-BUILD
DEMANDS ON THE OWNER

5 A defined budget and authorized funding

DB typically relies on a fixed price or guaranteed maximum price at an early design stage.

6 Ability to evaluate proposals

For best-value selection, the owner needs a transparent scoring system and people qualified to judge technical, qualifications, and price components.

7 Independent oversight

Without an architect on the owner's side, the owner should hire an owner's representative or advisor to review design progress and quality.

8 Acceptance of reduced checks and balances

The designer works for the builder, so independent quality review is weaker unless the owner supplies it.

DESIGN-BUILD
PROS & CONS

BENEFITS

SINGLE ACCOUNTABILITY - One contract and one team responsible for design and construction.

FASTER DELIVERY - Design and construction overlap, shortening time to occupancy.

EARLY COST CLARITY - Builder pricing guarantee during selection ensures the project stays on budget.

INTEGRATED INNOVATION - Designer and builder collaborate on value from day one.

LESS OWNER BURDEN - Fewer interfaces and claims, and less coordination effort.

DRAWBACKS

LESS DESIGN CONTROL - Requirements must be locked early; later changes are costly.

FEWER CHECKS AND BALANCES - No independent designer advocating for the owner.

QUALITY HINGES ON THE BRIEF - Vague criteria or cost pressure can erode outcomes.

COSTLY PROCUREMENT - Proposals are expensive and can narrow the bidder field.

ENHANCED PROGRAMMING RISKS - Poor documents will lead to lesser quality and greater uncertainty.

CM/GC MECHANICS

PROCESS

1. **SELECT** – Owner hires a designer, then a CM/GC based on qualifications and fees
2. **PRECONSTRUCT** – CM/GC advises on cost, schedule, and constructability during design
3. **PRICE** – Parties negotiate a GMP as design matures
4. **BUILD** – GM/GC builds, often releasing work in phased packages

2 CONTRACTS

Owner-Designer & Owner-CM/GC

VBS

Value Based Selection

GMP

Guaranteed Maximum Price set once design matures

CM/GC
DEMANDS ON THE OWNER

1 Willingness to select on qualifications

CM/GC is typically based on qualifications, team, and fees rather than low bid, so the owner needs defensible selection criteria.

2 Active, engaged participation

The owner must be present and actively engaged in preconstruction, with regular meetings, scope decisions, and value-engineering choices.

3 Strong contract and cost-management skill

The owner must understand open-book accounting, GMP development, allowances, budgets, contingency, general conditions, and fee structure, and be able to audit them.

4 Ability to negotiate

The owner negotiates budgets, allowances, the GMP and subcontract packages, and needs the knowledge or a consultant to assess whether pricing is fair.

CM/GC
DEMANDS ON THE OWNER

5 A collaborative orientation

The model depends on trust among owner, designer, and CM/GC; owners not willing to engage in all aspects put themselves and the project at risk of overruns and fraud.

6 Capacity to manage two contracts

The owner holds separate contracts with the designer and the CM/GC, and must keep the team aligned.

7 A willingness to pay for preconstruction services

The owner must be willing to engage with the design team and CM/GC to ensure preconstruction services are provided and realized.

8 Willingness to decide on a reasonably early GMP point

The owner must be comfortable setting a GMP before design is 100% complete and accepting the risks of unresolved design.

CM/GC
DEMANDS ON THE OWNER

9 An exit strategy

The contract should allow the owner to fall back on competitive bidding, or move to another contractor, if GMP negotiations fail.

10 Schedule flexibility for fast-tracking

Owners should understand that phased or early-bid package work can speed delivery but increases coordination complexity and project risks.

11 Willingness to take on design-error & omission risk

The owner holds an implied warranty of the plans and specs, so gaps, conflicts, and omissions become the owner's change-order exposure.

CM/GC
PROS & CONS

BENEFITS

EARLY BUILDER INPUT - Estimating, scheduling, and constructability advice during design.

DESIGN CONTROL RETAINED - Owner keeps a direct contract with the designer.

FASTER THAN DBB - Work releases in phases while later design continues.

COLLABORATIVE AND TRANSPARENT - Qualifications-based selection and open-book pricing.

COST PROTECTION - A GMP caps exposure and can share savings.

DRAWBACKS

HIGHER COSTS - CM/GC traditionally incurs the highest cost per square foot

UNREALIZED PRECONSTRUCTION SERVICES - CM/GC fails to engage with the design team to produce a quality set of documents.

TWO CONTRACTS TO MANAGE - Owner coordinates designer and CM/GC and bridges gaps.

MORE OWNER INVOLVEMENT - Requires experienced staff and active participation.

BID PACKAGE RISK - Bid packages may lead to project budget overruns.

SIDE-BY-SIDE COMPARISON

	DESIGN-BID-BUILD	DESIGN-BUILD	CM/GC
OWNER CONTRACTS	Separate designer and contractor	One design-builder	Designer plus CM/GC
CONTRACTOR SELECTION	Competitive bid, usually low price	Qualifications, deliverables and price	Qualifications and fee-based
SCHEDULE	Longest: design, then build	Shortest: phases overlap	Fast: phased packages
COST CERTAINTY	Firm at award, after full design	Early, based on partial design	GMP set as design matures
DESIGN CONTROL	High	Limited after award	High, with builder input
MAIN OWNER RISK	Design errors and change orders	Gaps in owner criteria	Heavy owner involvement & pricing
RELATIONSHIPS	Arm's length, often adversarial	Team-based, one accountable party	Collaborative, open-book

HOW THE METHODS COMPARE FOR THE OWNER

	DESIGN-BID-BUILD	DESIGN-BUILD	CM/GC
NEEDS FULLY DEFINED SCOPE UP FRONT	Low	High (performance based)	Moderate
OWNER DESIGN CONTROL	High	Low	High
OWNER INOLVEMENT LEVEL	Moderate (high during claims/disputes)	Moderate, front-loaded	High throughout
NEEDS SOPHISTICATED COST/CONTRACT SKILLS	Moderate	Moderate to high	High
SCHEDULE SPEED	Low	High	Moderate to high
RISK FOR FRAUD	Low	High	High
COSTS	Low	Moderate	High

WHEN EACH METHOD FITS BEST

DESIGN-BID-BUILD
best fit when . . .

Scope if fully defined and unlikely to change

Lowest price matters most or the law requires bidding

Schedule is flexible and the owner wants full design control

DESIGN-BUILD
best fit when . . .

Schedule is the priority and speed to occupancy drives value

One accountable party is preferred over managing interfaces

Performance criteria are clear and the owner has a lean team

CM/GC
best fit when . . .

Project is complex or phased, such as occupied renovations

Scope or site is uncertain and builder insight is needed early

Owner wants design control plus collaboration with the builder

QUESTIONS THAT GUIDE THE CHOICE

	DBB	DB	CM/GC
How well-defined is the scope?	Fully defined	Criteria-based	Still evolving
How critical is the schedule?	Flexible	Fastest	Fast, phased
How much design control is needed?	Maximum	Limited	High
How much owner staff time exists?	Moderate	Least	Most
What do procurement rules allow?	Widely allowed	Varies	Varies

KEY TAKEAWAYS

1. **No method wins everywhere**
   Each method trades control, speed, and price certainty differently

2. **Match strengths to priorities**
   DBB favors price competition and control, DB favors speed and single accountability, and CM/GC favors early collaboration with design control

3. **Fit the method to the project**
   Weigh scope clarity, schedule pressure, owner capacity, and legal constraints, then build the contract to support the choice

CHECKLIST

REGARDLESS OF METHOD, THE OWNER SHOULD CONFIRM THESE BEFORE COMMITTING

1. **CLEAR PROJECT GOALS** ranked by priority (cost, schedule, quality, innovation)
2. **APPROVED FUNDING** and a realistic contingency
3. **A SINGLE EMPOWERED DECISION-MAKER** or a clear approval chain
4. **RISK TOLERANCE** and an understanding of who holds which risks
5. **QUALIFIED OWNER'S REPRESENTATIVE OR PM** in-house or hired
6. **FAMILIARITY WITH THE LOCAL MARKET** and the availability of qualified firms

QUESTIONS

Matt Boyer
Deputy Division Director
Division of Facilities Construction & Management
mboyer@utah.gov