

# Alternative Project Delivery Methods

January 28, 2020  
SWANA Florida/RFT January Conference

James Ball, PE, PMP, DBIA



# Agenda

1. Why use Alternative Delivery
2. Design-Bid-Build
3. CMAR
4. Lump-Sum Design-Build
5. Progressive Design Build
6. Preconstruction Services & Benefits
7. Schedule Comparison
8. Alternative Delivery- Florida Law
9. Owner Involvement
10. Questions



# Why use Alternative Delivery?

## **Attainment of benefits that match owner project objectives and expectations:**

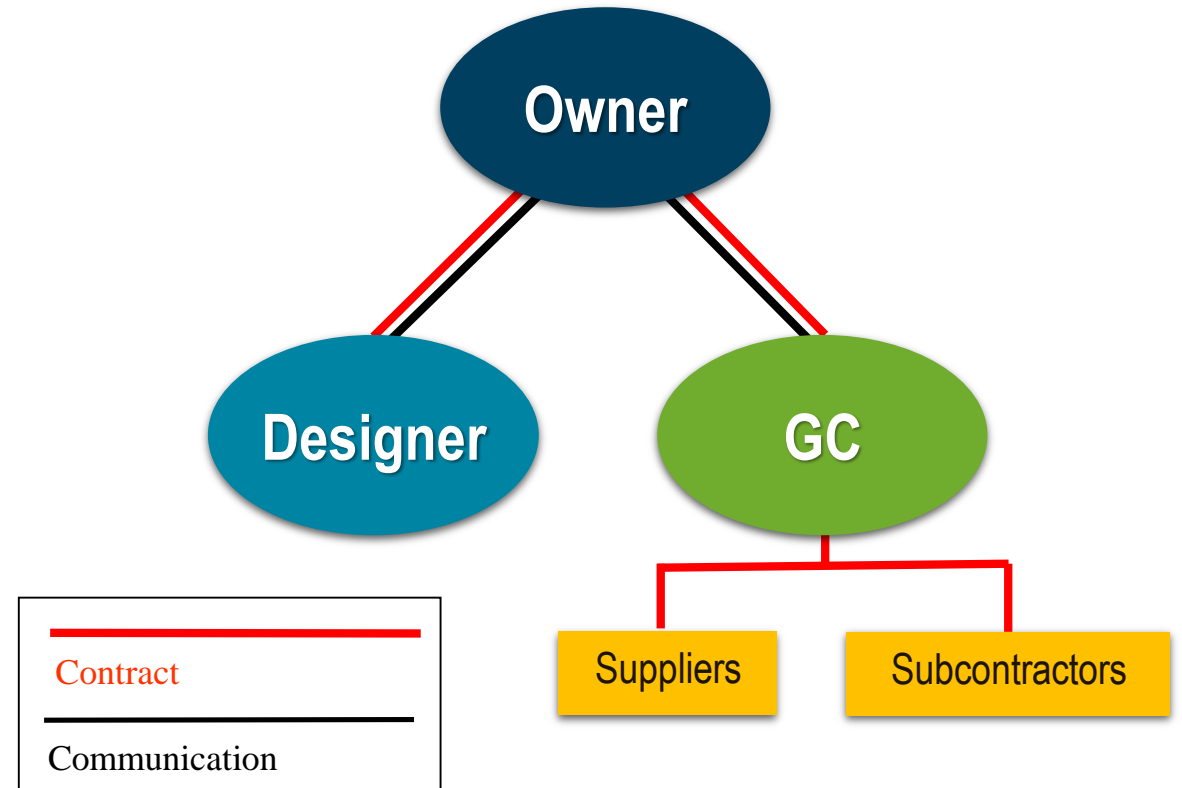
- Faster delivery time
- Better price certainty
- More cost-effective final price; potential for cost savings (capital and O&M)
- Enhanced risk allocation with guarantees contractually bound
- Greater control over scope, quality, price and schedule
- Creates lifecycle focus
- Increased collaboration and not confrontation
- Proper long-term asset protection; O&M considerations



# Traditional Design-Bid-Build

## Description

- Design engineer prepares plans and specifications
- Lowest bid from general contractor
- Separate design and construction contracts



# Traditional Design-Bid Build

## Advantages

- Familiar delivery method
- Owner controls design
- No legal barriers
- Permitting agencies familiar with process
- Owner gets the low competitive price

## Disadvantages

- Linear and sequential process
- Costs uncertain until bids received
- Selection based on low bid
- Owner warrants design
- No contractor input into design
- Difficult to make contractor qualifications part of bid



# Traditional Design-Bid-Build

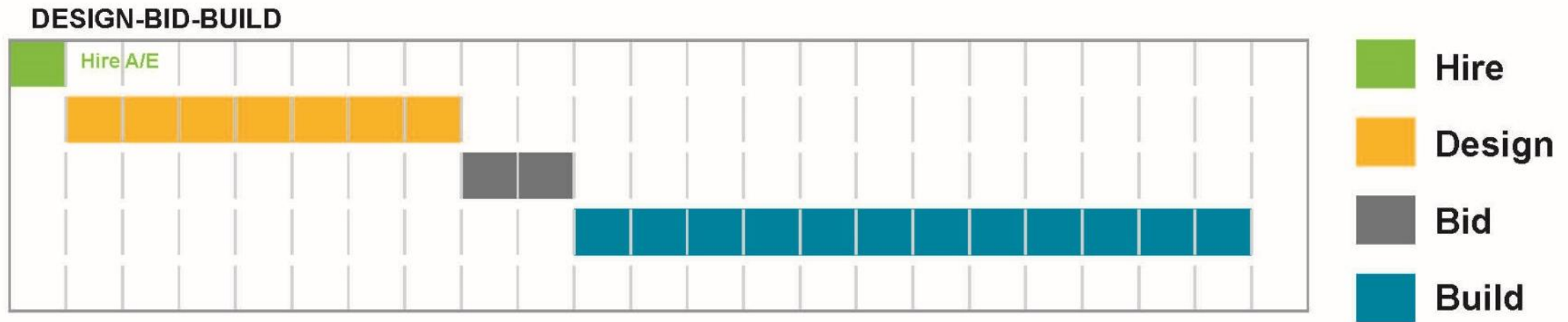
## Suitable Projects

- Owner wants complete control of design process
- Not time sensitive
- Contractor input not important
- Want project constructed for lowest bid
- Willing to accept risks



# Traditional Design-Bid-Build

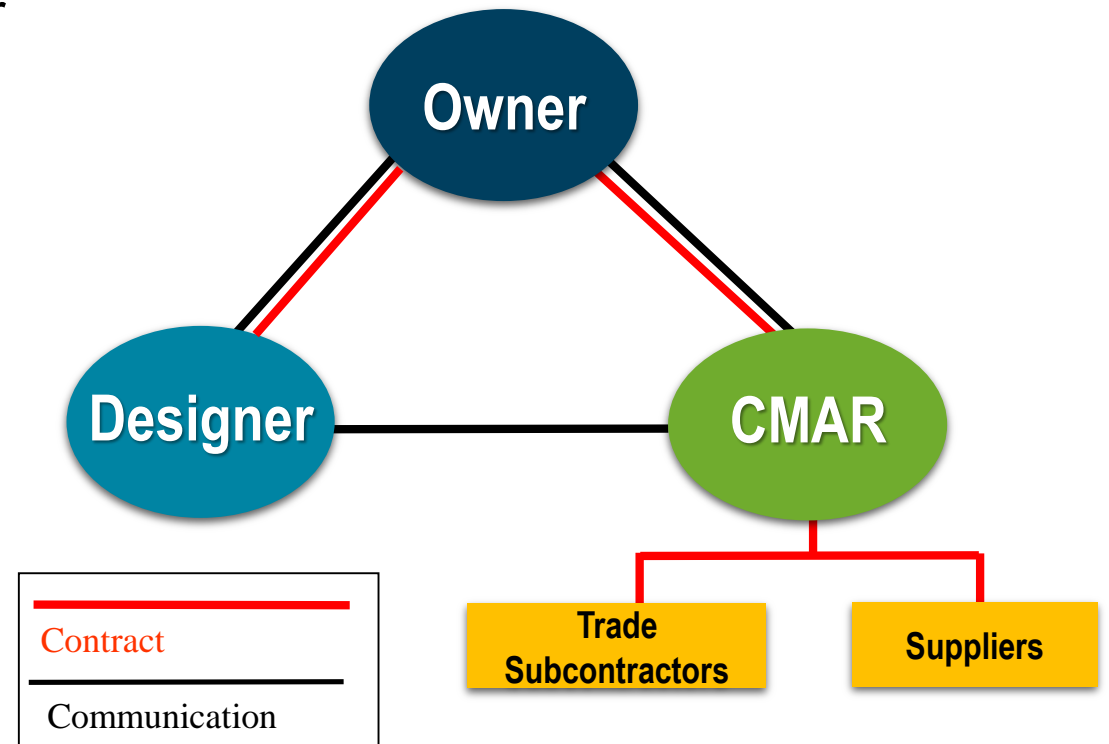
## Schedule



# Construction Manager at-Risk (CMAR)

## Description

- Qualifications-based selection of CMAR similar to selection of design engineer
- Two-phase delivery process: **Preconstruction & Construction**
- CMAR develops estimates and schedules as well as constructability reviews at 30%, 60% and 90%
- CMAR's subcontractors and suppliers are approved by owner
- CMAR cost is direct cost of construction plus fixed or percentage fee
- Guaranteed Maximum Price (GMP) establishes typically at 60% or 90% design
- Contingency included for project risks





# Construction Manager at-Risk (CMAR)

## Advantages

- Best-value procurement process
- Transparent cost accounting
- Cost certainty
- Reduces delivery time
- Early discussion & mitigation of risks

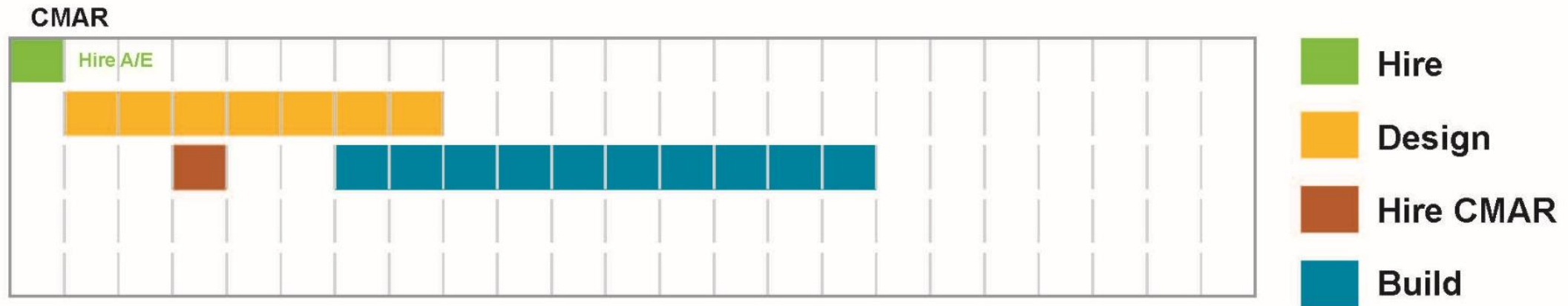
## Disadvantages

- No single-point accountability
- Requires involvement of owner
- Cost unknown at time of contract signing



# Construction Manager at-Risk (CMAR)

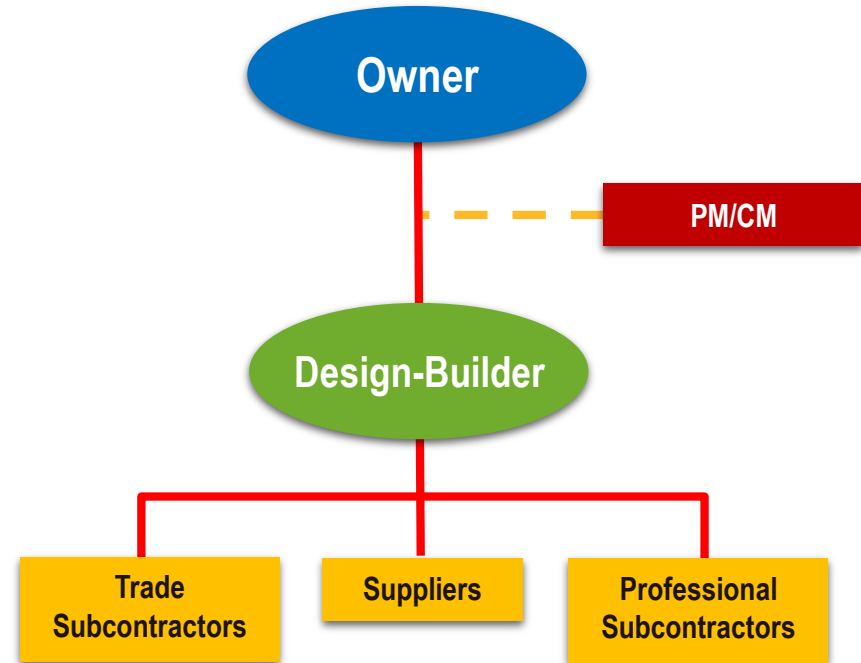
## Schedule



# Design-Build

## Description

- Designer and constructor under one contract
- Qualifications- and compensation-based selection
- DB solicits and holds subcontracts as in DBB
- DB contractor may or may not be allowed to self perform construction



# Design-Build Delivery Methods

- **Lump Sum Performance Design-Build**
  - RFP generally includes performances requirements, not drawings
  - Standard specifications used
  - Owner selects DB based on price, qualifications and schedule
- **Lump Sum Prescriptive Design-Build**
  - RFP includes 10% to 30% drawings and specifications
  - Owner input during design criteria development
  - Owner selects DB based on price, qualifications and schedule
- **Progressive Design-Build**
  - Owner and DB advance design together with details from owner
  - Lump sum or Guaranteed Maximum Price set between 60% and 90%
  - Owner selects DB based on qualifications



# Design-Build Attributes

- Owner engages a DB based on technical requirements, other considerations and price
- DB responsible to complete design and construction for a lump sum price
- Owner has one contract with a DB ( JV or single entity)
  - Owner can retain technical advisor
- Single point of accountability for design and construction
- Demonstration that project can achieve defined performance
- Design builder responsible for all subcontractors, vendors, suppliers, etc.
- Design builder responsible for project safety



# Lump Sum Design-Build

## Advantages

- Single entity responsibility
- Early cost certainty
- Cost, schedule and performance guarantees
- High level of innovation for Performance DB
- Potential for less Change Orders

## Disadvantages

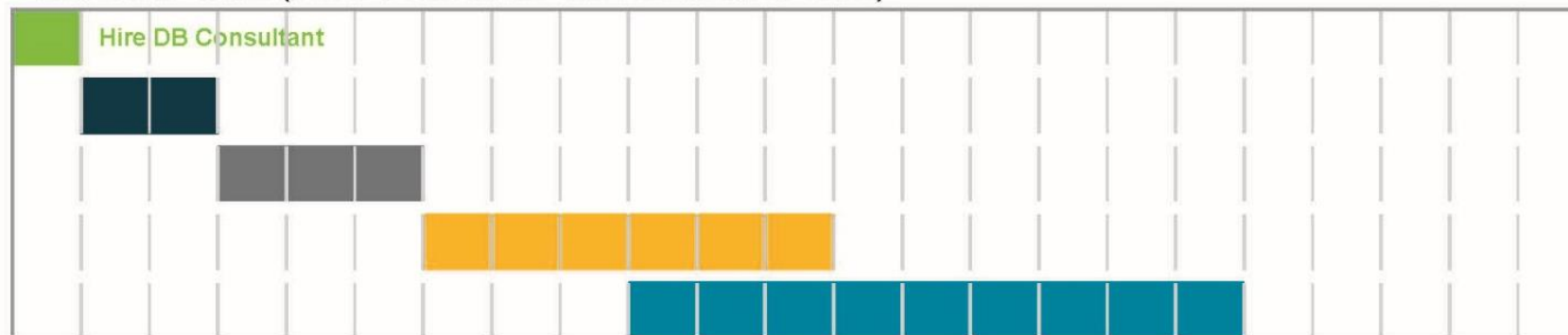
- Performance requirements can be difficult to describe
- Prescriptive framework may limit innovation
- Limited owner input into design
- May be higher O&M and life cycle costs
- High cost of proposal may limit interest
- Longer procurement process
- Owner ability to adjust without resulting CO's



# Lump Sum Design-Build

## Schedule

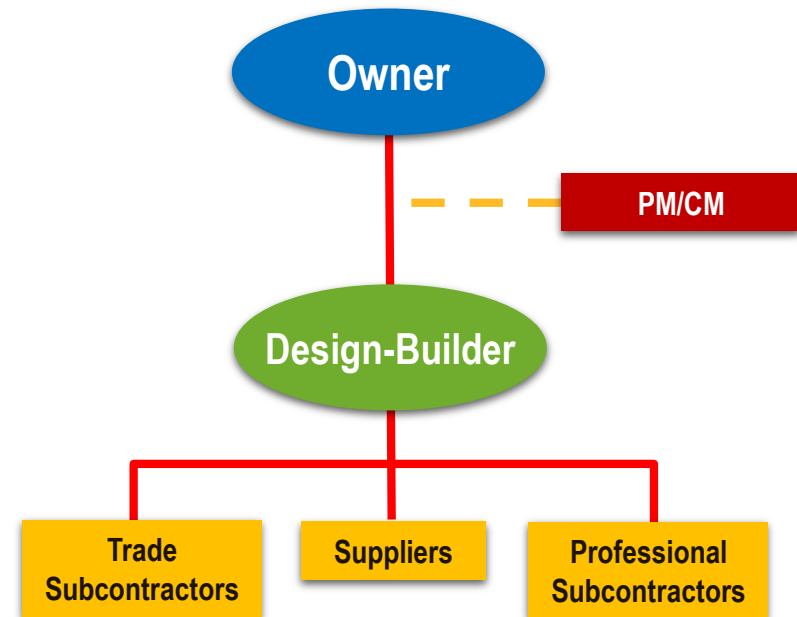
DB LUMP SUM (PERFORMANCE OR PRESCRIPTIVE)



# Progressive Design-Build (PDB)

## Description

- Qualifications-based selection of DB contractor
- DB contractor may or may not be allowed to self-perform construction
- GMP set between 60-100% design
- Cost-plus similar to CMAR or Lump Sum after design





# Progressive Design-Build Attributes

- Owner engages a design builder based on the qualifications
- Owner and builder collaborate on the design effort and design builder provides preconstruction services
- Design builder is responsible to complete the design and construction typically under a GMP approach
- Design builder undertakes and is responsible for construction through a combination of self perform and competitively bid construction work
- Owner has one contract with design builder
- Implementation closely resembles CMAR



# Progressive Design-Build

## Advantages

- Single point of responsibility
- Preserves owner control throughout design
- 100% of the equipment and subcontracts are competitively bid similar to CMAR
- Involvement of construction professionals and O&M personnel throughout design
- Shortest schedule for procurement and construction
- Owner has off-ramp prior to GMP approval

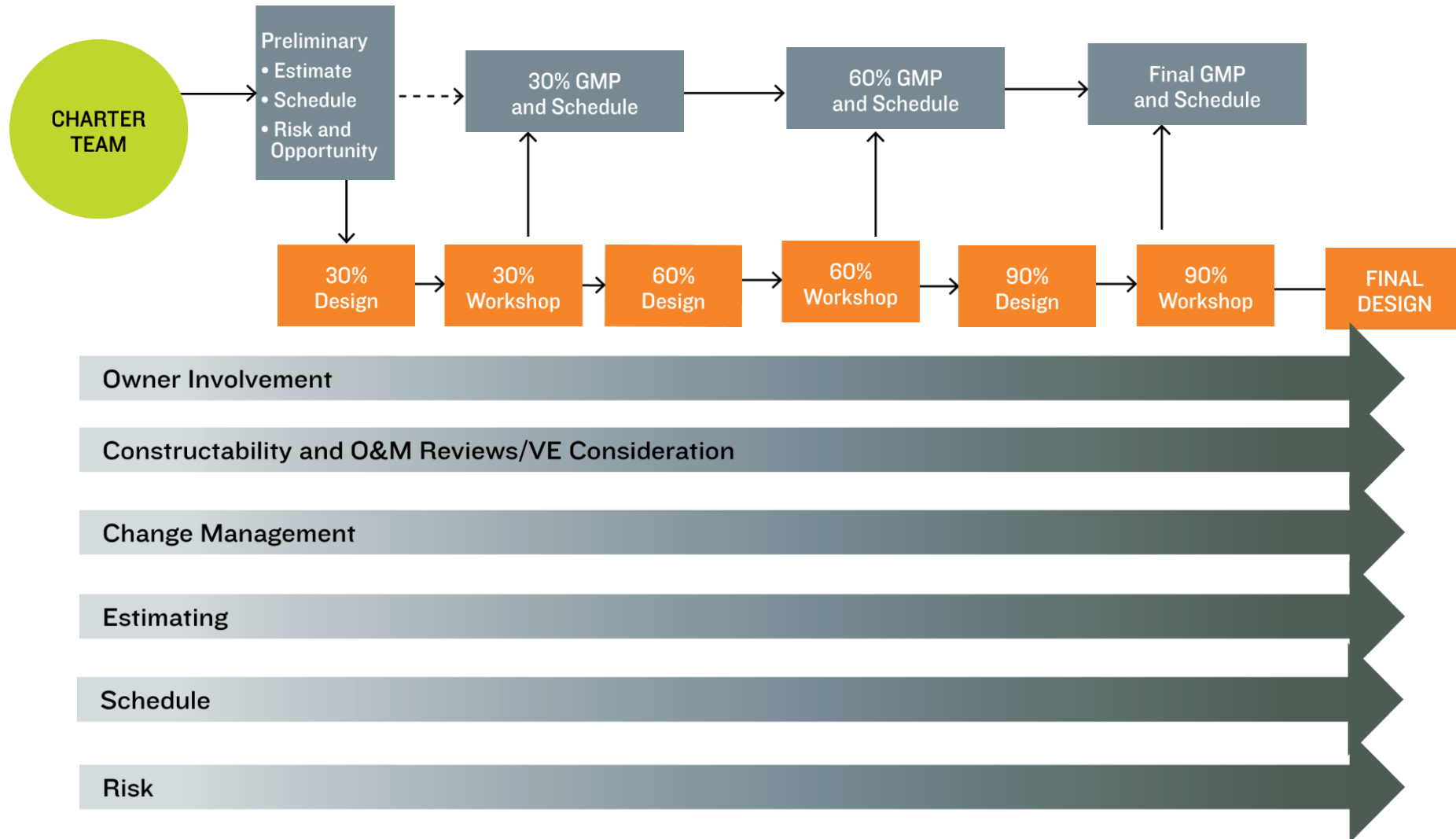
## Disadvantages

- Construction cost unknown at initial contract signing
- May need public education campaign



# Progressive Design-Build

## Essence of the Benefits through Collaboration and Integration:



# Preconstruction Services and Benefits

- Fosters a collaborative team relationship
- Constructability to reduce costs and save time
- Accurate estimating and scheduling to ensure budgets and schedules are met
- Reduce potential for change orders
- “VE” cost and time savings
- Can include life cycle considerations, operability, ease of maintenance

Reduce  
Cost



Reduce Time

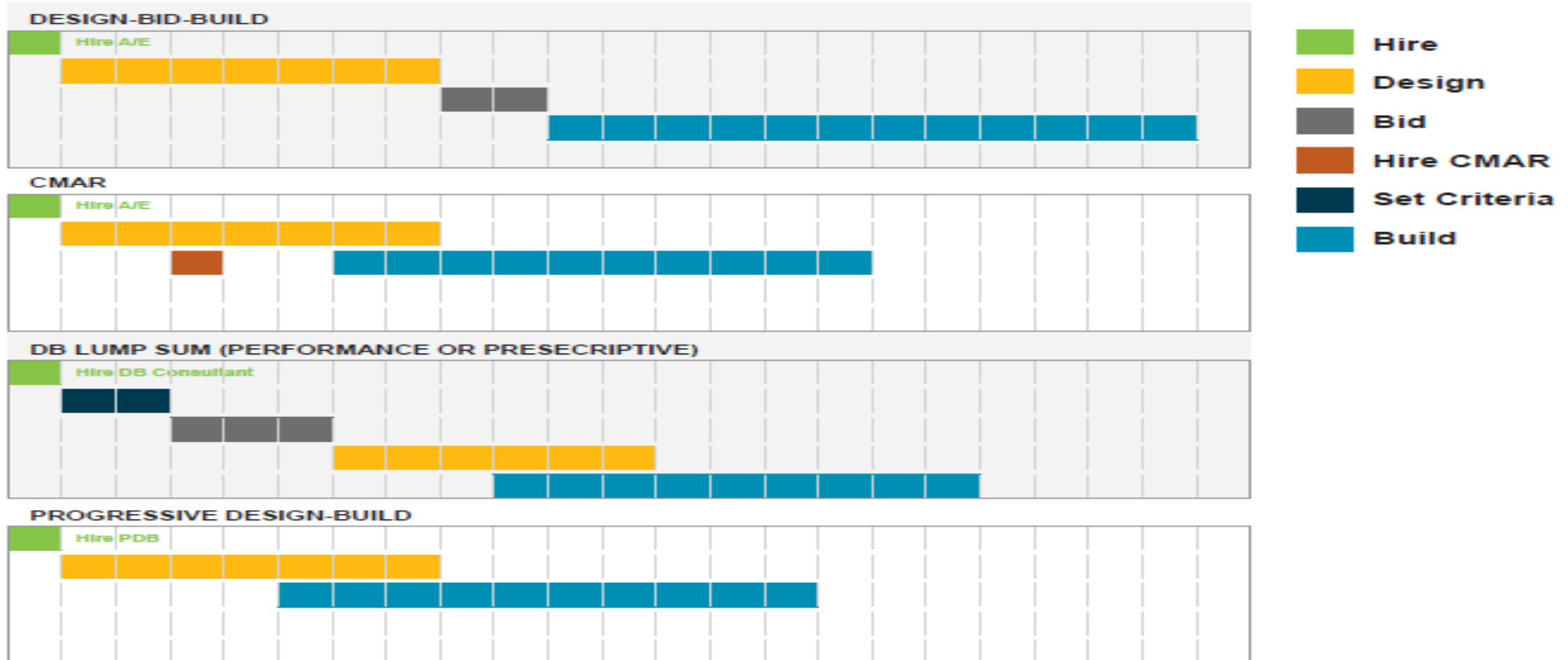


Reduce  
Change  
Orders



# Alternative Delivery- Schedule Comparison

## Schedule Comparison



# Alternative Delivery- Florida Law

## Florida Statutes-Chapter 287, Section 287.055

### Consultants' Competitive Negotiation Act (CCNA)

CCNA provides for a competitive proposal selection process or qualifications-based procurement and selection process for the acquisition of design build services



Procurement Type	Attributes
<b>Best Value Lump Sum Design Build</b>	<ul style="list-style-type: none"><li>• Best value type procurement taking into account project price and other non-price considerations</li><li>• Firm fixed price (lump sum) price proposal</li><li>• Owner design (10%- 30% design) required for procurement combined with performance based technical requirements</li></ul>
<b>Qualifications based (i.e. Progressive Design Build)</b>	<ul style="list-style-type: none"><li>• Qualifications based procurement</li><li>• Guaranteed Maximum Price during preconstruction services</li><li>• No or little design required for procurement</li></ul>



# Owner Involvement

## Owner must have:

- Strong internal advocate for alternative delivery
- Team member with strong understanding of contract method
- A clear understanding of responsibilities
- Desire to participate and communicate

## It's the Owner's Choice!

Owners have to consider advantages and disadvantages and the relative priority/weight of each and how they match with the project objectives and expectations.



Questions????

Thanks for  
your time.

