E.A. BONELLI
Architects + Engineers

Marco Di Gino, President
Brad Chicoine, Architectural Designer
Keys to a Successful Project
Planning, Design, and Execution
Planning
Planning

Choosing the Right Delivery Method
Design-Bid-Build (D-B-B)

• Most traditional method

• Design, bidding and construction documents completed prior to bidding and construction

• Contractor determined by selecting one of several bidders
Design-Bid-Build (D-B-B)
Design-Bid-Build (D-B-B)
Design-Bid-Build (D-B-B)
Design-Bid-Build (D-B-B)
Design-Bid-Build (D-B-B)
Design-Build (D-B)

• Simplified contract method

• Owner contracts with single D-B entity

• D-B entity may be Contractor who subcontracts Design work, or vice versa

• D-B entity may be a single company, or a joint venture formed by A/E and Contractor
Design-Build (D-B)
Design-Build (D-B)

Owner

Design-Build Entity

Architect  Contractor

Design and Construction Contract
Design-Build (D-B)

Owner

Consultant

Design-Build Entity

Consultant

Architect

Contractor

Consultant

Subcontracts

Subcontractor

Subcontractor

Subcontractor
Design-Negotiate-Build (D-N-B)

• Similar to D-B-B

• Construction documents do not need to be completed before a cost is negotiated between owner and contractor

• Negotiating work results in less adversarial construction

• Owner is permitted to participate in selection of subs and suppliers if desired
Design-Negotiate-Build (D-N-B)
Design-Negotiate-Build (D-N-B)
Design-Negotiate-Build (D-N-B)

Pre-design consultation and assistance

Pre-design pricing and assistance

Architect

Owner

Contractor
Design-Negotiate-Build (D-N-B)
Design-Negotiate-Build (D-N-B)

- Owner
  - Consultant
    - Consultant Contract
  - Consultant
    - Consultant Contract
  - Design Contract
  - Construction Contract
  - Administrative

- Contractor
  - Subcontractor
  - Subcontractor
  - Subcontractor
  - Subcontractor
  - Subcontracts

- Architect
  - Consultant
    - Consultant Contract
  - Design Contract

- Suppliers
  - Purchase Order

- Sub-subcontractor
  - Sub-subcontract
  - Subcontractor
Design
Design

Understanding Plant Layout
Planning Flow: Optimum Efficiency

Receiving
Planning Flow: Optimum Efficiency

Receiving → Raw
Planning Flow: Optimum Efficiency

Receiving → Raw → Processing
Planning Flow: Optimum Efficiency

- Receiving
- Raw
- Processing
- Packaging
Planning Flow: Optimum Efficiency

- Receiving
- Raw
- Processing
- Packaging
- Storage & Shipping
Planning Flow: Optimum Efficiency

Utilidor

Receiving ➔ Raw ➔ Processing ➔ Packaging ➔ Storage & Shipping
Planning Flow: Optimum Efficiency

Personnel, Utilities, and Ingredients

- Receiving
- Raw
- Processing
- Packaging
- Storage & Shipping
Planning Flow: Optimum Efficiency

Welfare & Utility Block

Personnel, Utilities, and Ingredients

Receiving → Raw → Processing → Packaging → Storage & Shipping
Planning Flow: Optimum Efficiency

Personnel, Utilities, and Ingredients

Receiving → Raw → Processing → Packaging → Storage & Shipping

Welfare & Utility Block

What about optimum sanitation?
Planning Flow: Optimum Efficiency

What about optimum sanitation?
Hygiene Zones: Shell Model
Hygiene Zones: Shell Model
Hygiene Zones: Shell Model

Hygiene Level

④ ③ ② ①
Hygiene Zones: Shell Model
Hygiene Zones: Shell Model

Hygiene Level

Hygiene Transition Room

1

2

3

4
Hygiene Zones: Shell Model

Hygiene Level

1

2

3

4

Hygiene Transition Room

Hygiene Transition Room
Hygiene Transition Room
Hygiene Transition Room
Hygiene Transition Room

Personnel Flow
Hygiene Transition Room

Personnel Flow

- Sanitize
- New Boots
- Smock
Hygiene Transition Room

Air Flow
The Cleaner the Room, the Greater the Air Pressure
Hygiene Zones: Branch Model

Hygiene Level 4
Hygiene Zones: Branch Model

Hygiene Level

4

3
Hygiene Zones: Branch Model

Hygiene Level

4

3

2


color=red

color=yellow


Hygiene Zones: Branch Model

Hygiene Level

1

2

3

4
Hygiene Zones: Branch Model

- Hygiene Transition Room
- Hygiene Level
Hygiene Zones: Branch Model
Other Considerations

• Hygienic Finishes
• Hygienic Detailing
• Ease of Maintenance
• Cleanability
Execution
Execution

Promoting and Ensuring Collaboration
Promote Mutual Goals

• Clearly defined scope
• Proper budget with consistent updates
• Adherence to schedule
Focus on Collaboration

- Building Information Modeling (BIM)
- Executive Meetings
- Phased construction
Case Study

Bel Brands USA - Brookings, SD
Bel Brands USA
Brookings, SD
Questions?
Keys to a Successful Project

Planning, Design, and Execution
Thank You