



International
Association for
Cold Storage
Construction



Technical Considerations for High-Rise Cold Storage Facilities

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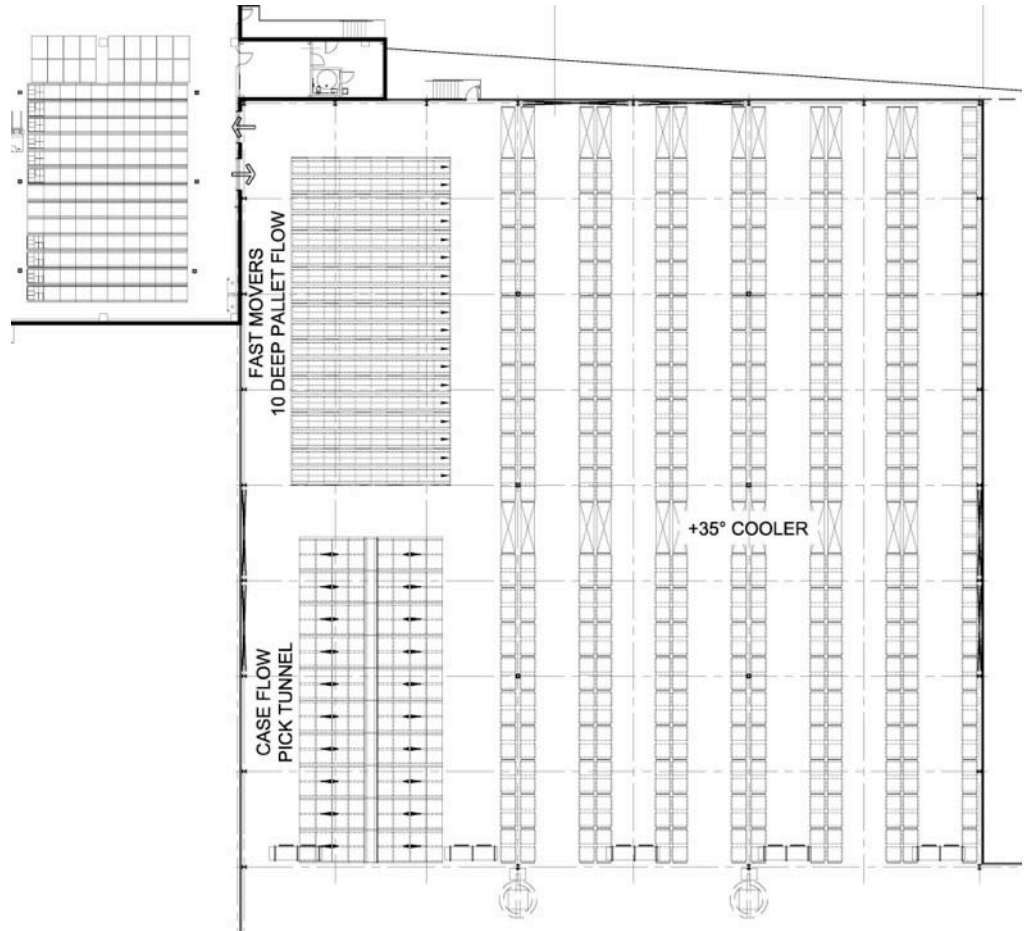


AGENDA

- Planning
- Design
- Construction
- Q & A

PLANNING

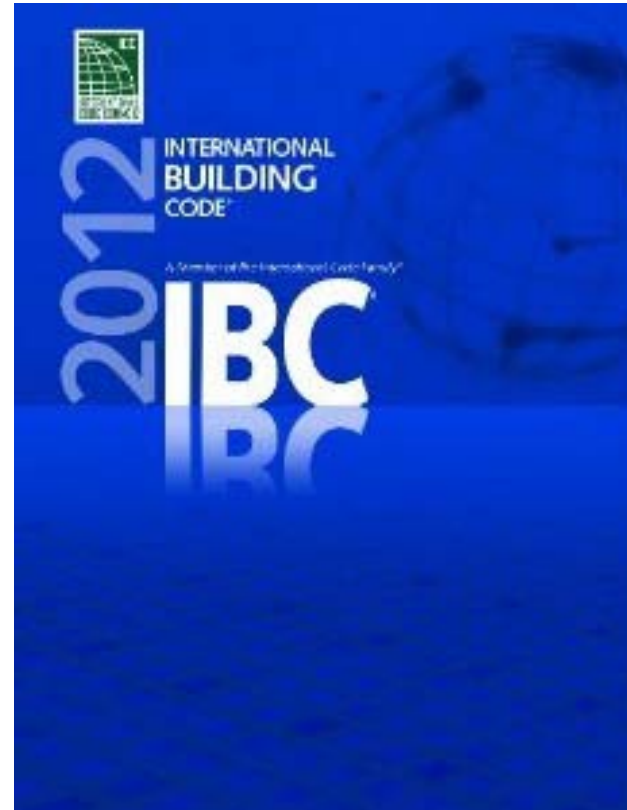
- Does it make sense?
 - Quantity of pallets
 - High Density Storage Capacity
 - Site Size
 - Location (Market)
 - Flexibility
- Select ASRS Vendor
- Design & Construction Team Collaboration



HIGH-RISE AS/RS CONSTRUCTION

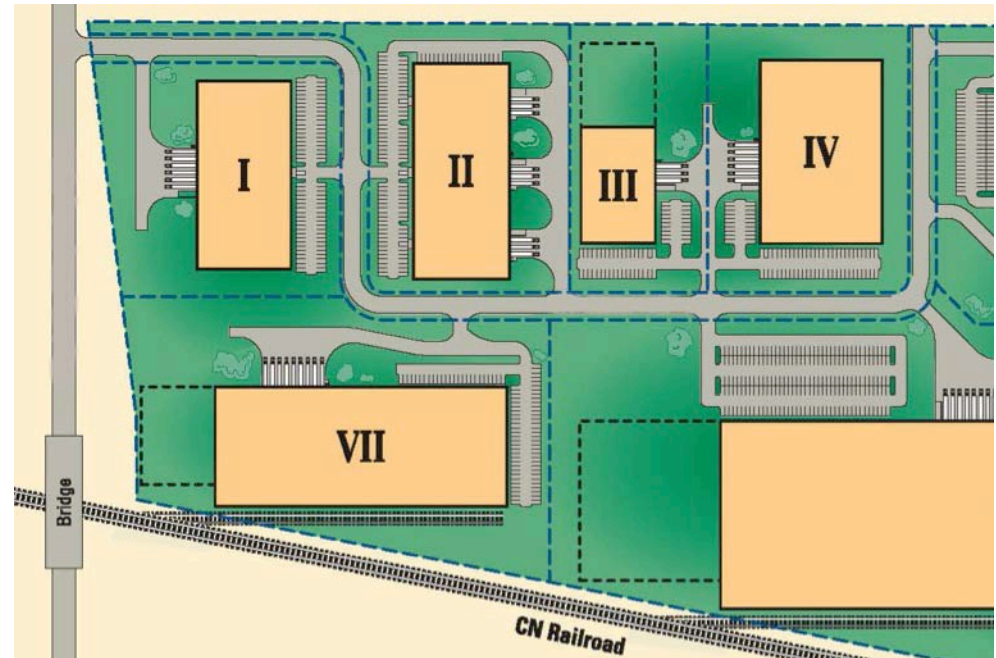
DESIGN

- Code Considerations
 - Building Code
 - Fire Code
 - Insurance Underwriter Requirements



DESIGN

- Local Ordinances
- Site Specifics
 - Setbacks
 - Fire Department Access
 - Proximity to Airport
 - Lightning Protection
 - Rail Access



DESIGN

- Loading Considerations
 - Foundation Systems
 - Seismic
 - Wind
 - Uplift
- Slab Options
 - Steel fiber reinforced concrete
 - Increased slab depth
 - Piles integrated into the design
- Coordination of Slab Reinforcement
 - Reinforcing Steel
 - Seismic Requirements



CONSTRUCTION

- Pad Development
 - Subgrade
 - Temporary storm water management
 - Sump
- Underfloor Systems
- Slab Placement
- Structure
- Building Envelope
- Material Handling Doors



BUILDING SUPPORT SYSTEM

1. Fire Protection
2. Refrigeration
3. Electrical



SITE MANAGEMENT

- Tremendous amount of material
- Close coordination between ASRS vendor and Design-Builder
- Laydown Areas
- Site Conveyance
 - Hydraulic wheeled cranes
 - Tower Crane
 - Personnel
- Power to Tower Crane
- Overhead Safety



QUESTIONS & ANSWERS

THANK YOU!

