DECK SELECTION PER VULCRAFT STEEL ROOF AND FLOOR DECK MANUAL

ROOF DECK SELECTION

Fire rating: 1 HR (see sheet 3) Vulcraft page 18 "Roof Deck Fire Resistance Ratings"

Exposed grid acoustical tile ceilings, rigid roof insulation
Deck type B (wide rib), F (intermediate rib), and A (narrow rib)
All can satisfy 1 hr fire rating requirement.

Deck Type: B works well with thicker insulation required for project location.
Depth of 1 1/2", again most common, no special needs for wide spacing of roof joists on this job.
Sheet metal thickness, use 20 gauge for nice constructability and working platform and nice weldability.

Roof Decks According to Load Demand

Live Load =	
Dead Load =	
Total =	

(Assumption to be verified during roof joist selection, see sheet 16)

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-Max SDI construction span = length of span (unshored) for construction
-Run over 3 or more sets of joists - 3 span

Choose - B20, Max SDI Const. 3 Span = 7'-9", Allowable Total Load = 114 psf for 6'-0" spans

FLOOR DECK SELECTION

Fire Rating:

Since fire rating often controls minimum deck, select deck for fire rating then check for strength to meet load demand. 2 Hr (see sheet 3) Vulcraft page 60-61 "Floor-Ceiling Assemblies with Composite Deck"
Unprotected deck (conservative assumption)
Light Weight concrete (LTWT CONC)
Need 3-1/4" LTWT Conc on 1-1/2" deck
Total slab depth =

Deck Type

Use composite deck as common choice
Depth 1-1/2", again common
Sheet metal thickness, use 20 gauge for nice construction working platform and nice weldability

Floor Decks According to Load Demand

	(psf)
Live Load =	
Dead Load =	
Total =	

Use allowable stress design for deck
Slab dead weight = Vulcraft page 43
SDI Max. Unshored Clear Span,
Allowable superimposed load =

Red font indicates user input