Creating Solutions Together

Surf Club, Miami Beach Condo-Hotel
Creating Solutions Together

The Surf Club, Four Season Private Residences

Project Owner
- Four Seasons

General Contractor
- Coastal Construction

Frame Contractor
- Baker Concrete. Inc

Engineer of Record
- De-Simone Consulting Engineers

Specialty Engineer
- Kline Engineering & Consulting

Post-Tensioning Sub-contractor
- VSL-Florida
Established in 1930, the celebrated Surf Club has stood the test of time as South Florida’s premier private beach club. The Surf Club has attracted a litany of world-famous personalities including General Douglas MacArthur; perhaps the club’s most famous guest was Sir Winston Churchill, who visited in 1946 to paint panoramic seascapes from the balcony.
Team Solutions

- 6’ thick post-tensioned transfer slabs
- Post-tensioned columns to be supported from roof level
- Use of both mono-strand and multi-strand to make the designs as efficient as possible.
Surf Club, Four Season Private Residences, Buildings Layout

- Residential Transfer Slab B-1
- Hotel Transfer Slab B-2
- Sky-Hook Beams & Hanging Columns
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Residential Transfer Slab

- **Slab Geometry**
  - 80ft x 100 ft
  - 40 ft. Cantilever
  - 60 ft Span
  - Carrying 9 floors above
  - 6 ft Thick at the Column and Tapering to 3ft at edges
Residential Transfer Slab
Residential Transfer Slab

- 36"
- 72”-48”
- 72”
Residential Transfer Slab

- **Post-Tensioning System**
  - Distributed Tendons – Both Ways
  - VSL GC 6-37 Bonded System with 0.62” Dia. Strands
  - 0.5” dia. Unbonded cables in Balcony
  - Total 72 Tendons
  - Jacking Force per Tendon – 1391 Kips
  - 2 Stage Stressing
  - 234 ea. 1 ¾” Vertical PT Bars to handle Shear
Residential Transfer Slab
Residential Transfer Slab
Residential Transfer Slab
Residential Transfer Slab
Residential Transfer Slab
Hotel Transfer Slab
Hotel Transfer Slab

**Slab Geometry**
- 6 ft Thick
- 42 ft Cantilever Slab
- Carrying 8 Floors above
- 3D Modelling to Analyze Slab using ADAPT Edge
- 100ft x 72 ft dimension
Hotel Transfer Slab
Hotel Transfer Slab
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Hotel Transfer Slab
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Hotel Transfer Slab
Hanging Column
Hanging Column

30 ft Cantilever

PT column

PT column
Hanging Column
QUESTIONS??