The Grove at Grand Bay

LOCATION:
- Coconut Grove, FL

ARCHITECTS:
- Bjarke Ingles Group (BIG)
- Nichols Brosch Wurst Wolfe Associates

STRUCTURAL ENGINEER:
- DeSimone Consulting Engineers

GENERAL CONTRACTOR:
- Facchina Construction

CONCRETE CONTRACTOR:
- CapForm, Inc.

SQUARE FOOTAGE:
- North Tower Roof = 11,246 sf
- South Tower Roof = 10,645 sf
The Grove at Grand Bay

PROJECT CHALLENGES:
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- Torsional forces of tower design (inclined columns)
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- Specialized roof frame designed to transfer forces to steel building core
- Initial design using a heavy steel roof frame elements required complex lifting plan & equipment
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PROJECT SOLUTIONS:
The Grove at Grand Bay

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PROJECT SOLUTIONS:
- Cast-in-Place P-T roof frame design (Bonded Multistrand)
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- Cast-in-Place P-T roof frame design (Bonded Multistrand)
- Unbonded Monostrand slabs
Original Low Roof Framing Plan
Final Roof Design with Post-Tensioning
Final Roof Design with Post-Tensioning
Final Roof Design with Post-Tensioning
Final Roof Design with Post-Tensioning
Hydrostatic Slab
Approximately Area = 80,000 Sqf
Hydrostatic Slab
Approximately Area = 80,000 Sqf
Hydrostatic Slab
Approximately Area= 80,000 Sqf
1000 Museum Park

LOCATION:
- Miami, FL

ARCHITECTS:
- Zaha Hadid

STRUCTURAL ENGINEER:
- DeSimone Consulting Engineers

GENERAL CONTRACTOR:
- Plaza Construction

CONCRETE CONTRACTOR:
- CapForm, Inc.

SQUARE FOOTAGE:
- Tower = 1,140,000 sf
PROJECT CHALLENGES:
- Permanente GFRC forms will be use to form the Concrete Exoskeleton
- Pos-tensioning Tendons cannot be stressed from the face of the columns
1000 Museum Park
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