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# Career Development As a structural Engineer At



UNIVERSITY OF SEOUL

November 10, 2014

*Presented by:*

**Simon Shim, P.E.**

**Senior Associate**

**Thornton Tomasetti**

# Academic Background



- 1991 ~ 1997 : BS, Sung Kyun Kwan University
- 1992 ~ 1994 : KATUSA Military Service
- 1997 ~ 1999 : MS, University of Illinois at Urbana-Champaign

# Career Development

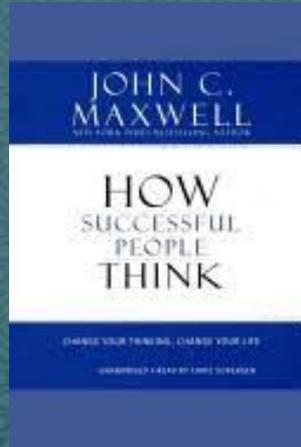
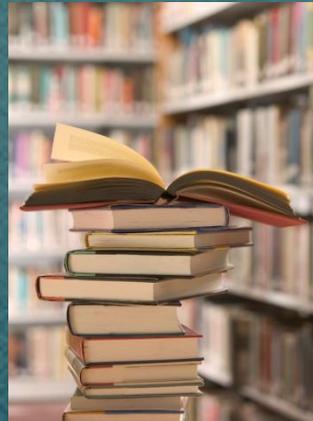
- 2005 ~ Present : Thornton Tomasetti (NY) 
- 2003 ~ 2005 : DeSimone Consulting Engineer (NY) 
- 2003 ~ : Professional Engineer at Michigan State
- 1999 ~ 2002 : Skidmore, Owings & Merrill (Chicago) 

# Purpose of Educations

Mentors:



Guide book:



Colleagues:



# Where is my way?

## CAREER PATH

대기업 내  
해외 부동산 투자

Architect  
건축 설계

Engineer  
구조 설계

대기업 건설 회사  
GC  
현대, 삼성 등등

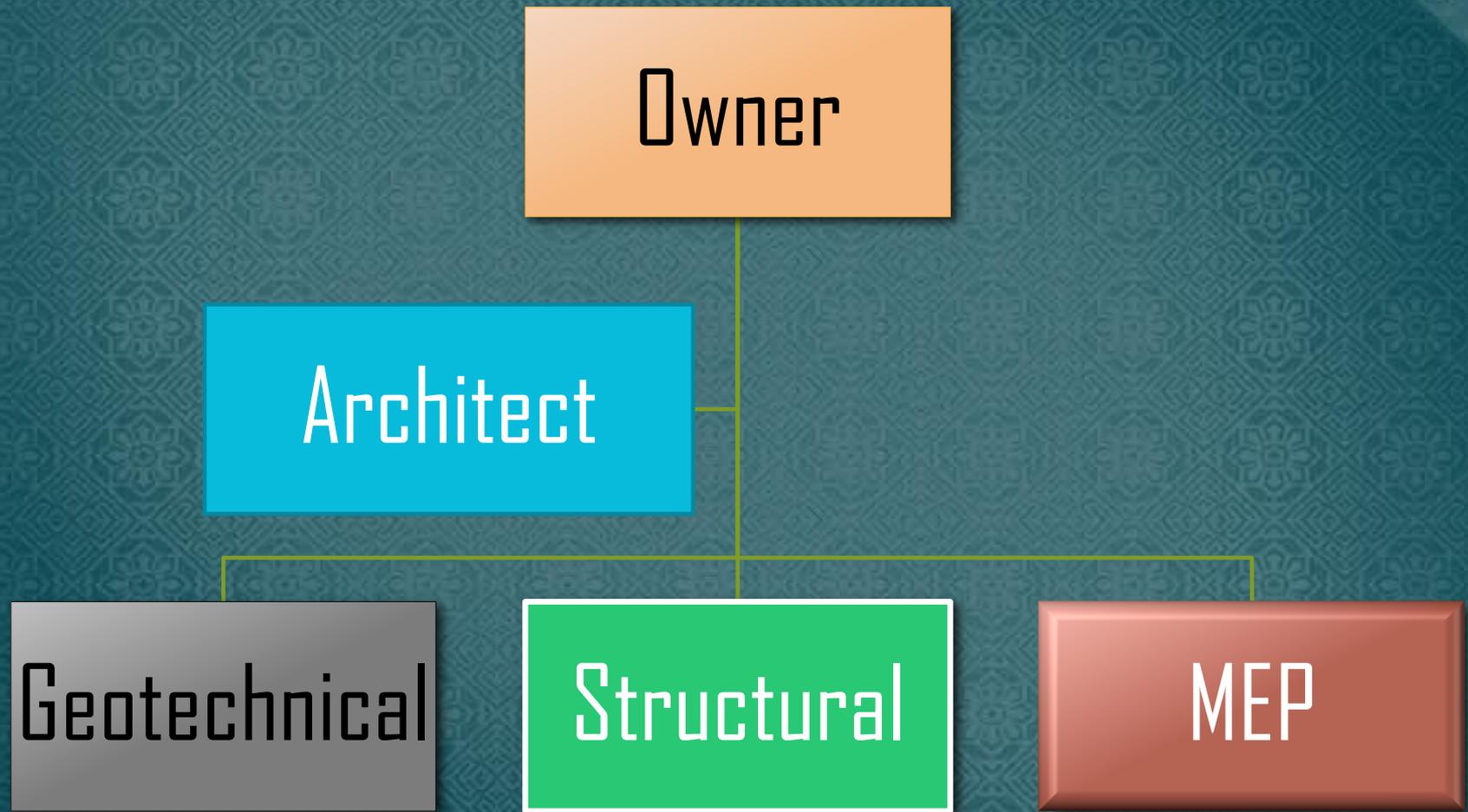
Specialty Consultant  
Facade Designer

Individual  
Entrepreneur  
불고기지, 치맥전문점,

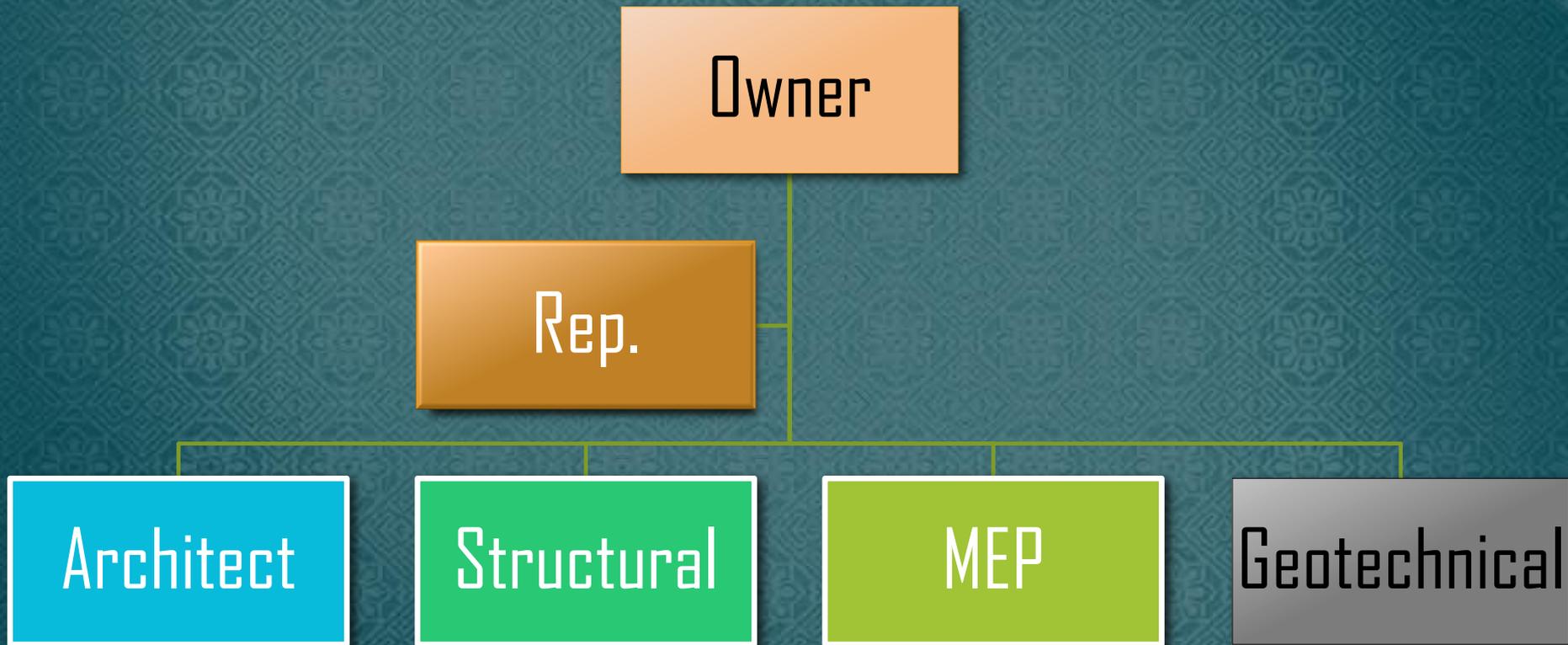
# Things to do during school year?



# Project Organization Chart



# Project Organization Chart



# How to build a network?

## Professional Organizations:

- AIA (Architect), AISC (Steel), ACI (Concrete), SeaoNY (New York Engineer)

## Construction Industry

- ENR
- 건축 도시 공간 연구소: [Auric.or.kr](http://Auric.or.kr)

## Professional Socializing:

Linkedin:



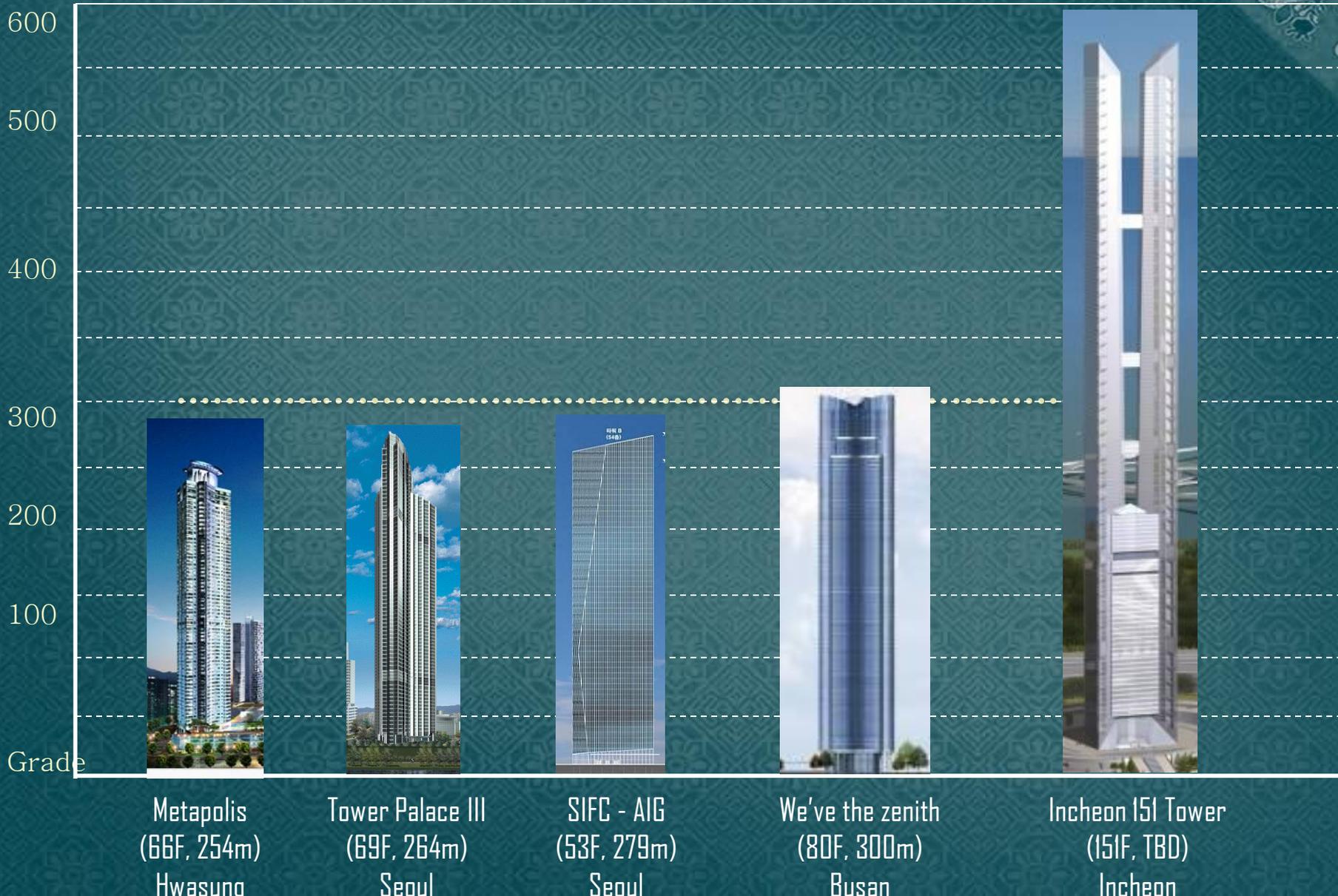


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**Thornton Tomasetti**  
New York

2005 ~ Present

# Highrise Experiences in Korea



# Shanghai Center



- 586 meters tall mixed-use tower
- 4 level below ground
- Performance Based Design (PBD)
- Architect: Gensler

# Incheon 151 Tower, Incheon, Korea



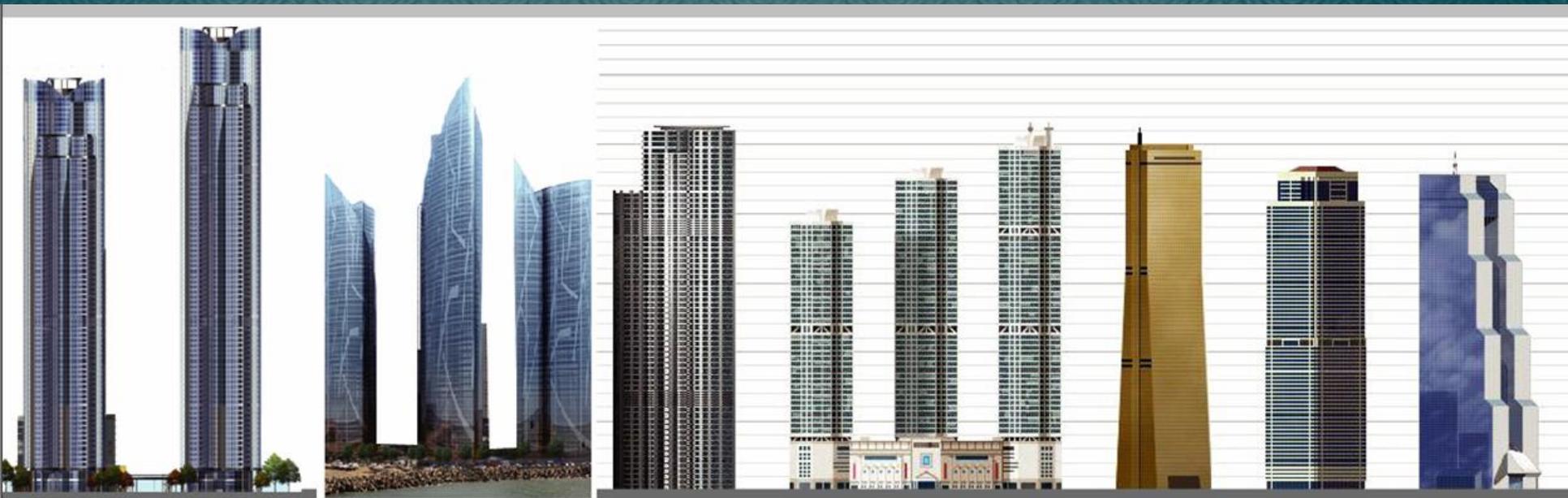
- 600 meters tall mixed-use tower
- 412,000 m<sup>2</sup> total gross area
- Architect:
- John Portman Associates

# We've The Zenith, Busan, Korea



- ◆ 80, 75 and 70 stories Residential towers with podium and six basement levels
- ◆ 6.7 million total SF
- ◆ Architect: Destepano Partners

# We've The Zenith, June 2009



Doosan we've the Zenith  
Haeundae  
Busan  
80

i' park  
Haeundae  
Busan  
72

Tower Palace 3  
Tower G  
seoul  
South Korea  
69

Mok-dong Hyperion Tower  
seoul  
South Korea  
69

KLI 63 Building  
seoul  
South Korea  
63

Tower Palace 1  
Tower B  
seoul  
South Korea  
66

Trade Tower  
seoul  
South Korea  
55

# Metapolis, Hwasung, Korea



- Two 66-story (248 m), one 50-story, one 60-story residential high rises,
- hotel and plaza with retail and community facilities
- 280,000 m<sup>2</sup> total
- Architect: Kunwon

# Seoul International Financial Center

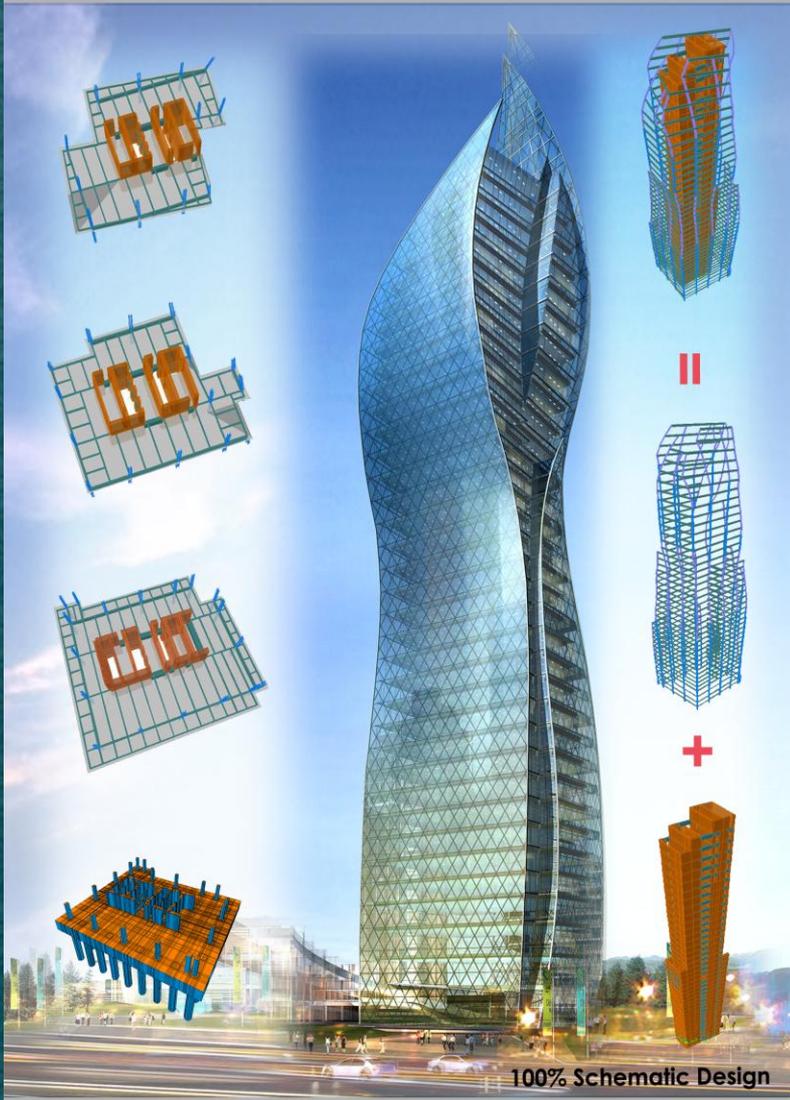
SIFC-AIG.....



- 53-story(279m), 31 and 34-story office towers,
- One 39-story hotel, and a retail mall
- Architect: Arqitectonica (NY)

# SOCAR

## NEW MANAGEMENT OFFICE OF SOCAR BAKU, AZERBAIJAN



## Baku, Azerbaijan

40-story, 160 meters tall tower  
above grade with 2 basement  
levels

Dual System  
Special RC Shear Wall +  
Special Steel Moment Frame

Architect: Heerim

# New Songdo City

..A 100 million square foot new city on 1,500 acres.....



- office space
- commercial
- residential
- green space/public use



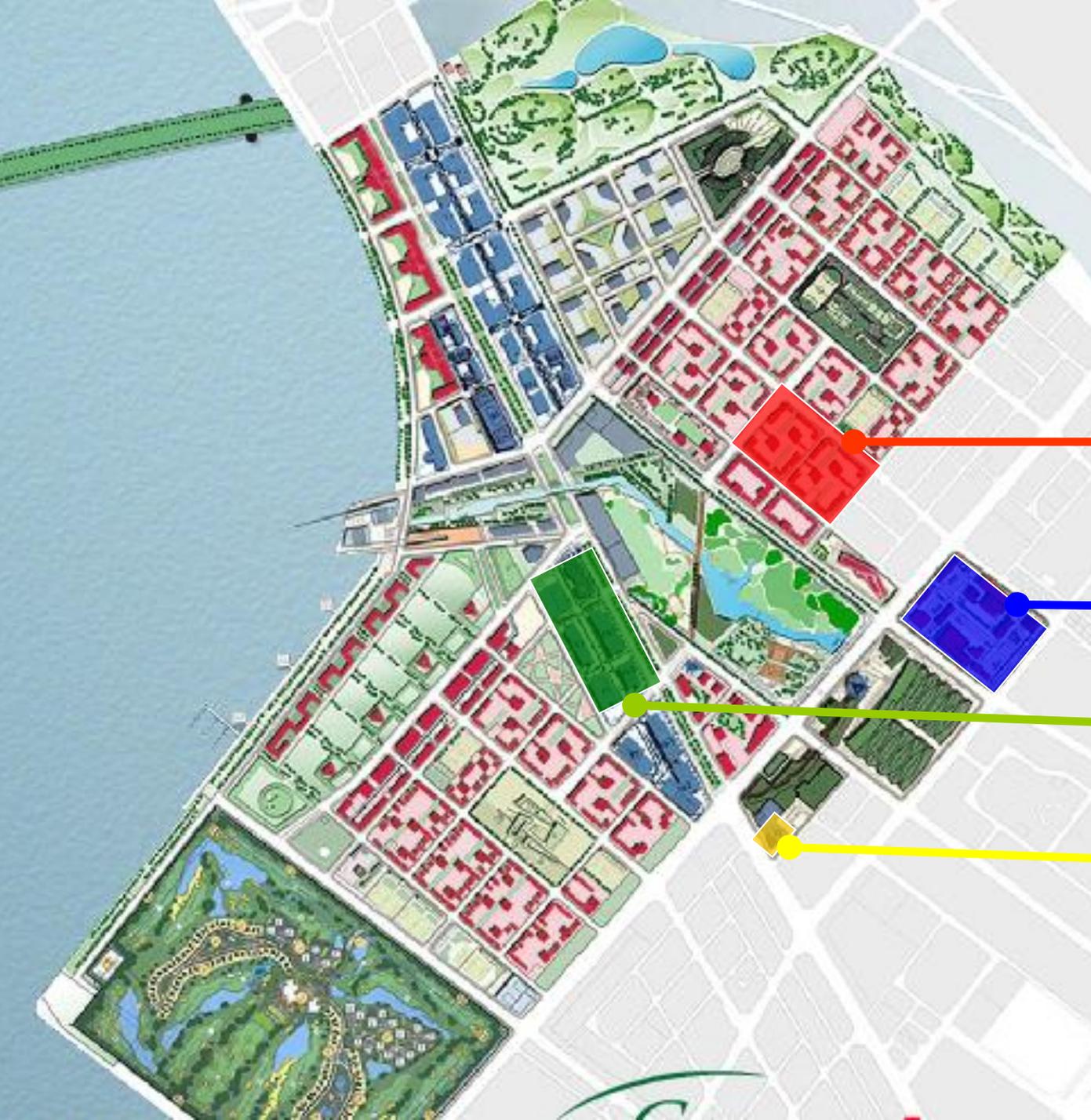
NSC D20/D21.1

NSC B1I25

NSC F7 Block

NSC A1 Block

# NSC



NSC  
D20/D21.1

NSC BL125

NSC F7 Block

NSC A1 Block

# New Songdo City Block D20/D21.1

## Songdo Xi Harbor View

- Six 30~40 story Residential Towers
- Midrise Residential
- 2007.8~2011.2
- 2.9 m SF.
- Architect: KPF



# NSC Block F7 Gateway Center

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- 17 story office
- RC Core
- Steel Floor Framing
- Architect:  
Kling Stubbins +  
Heerim

# New Songdo City – AI Tower



- ◆ 34-story office
- ◆ Area = 960,000 SF
- ◆ 2007.12~2011.10
- ◆ Architect:
- ◆ KPF + Junglim

# Super Tall Tower Competition:

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- Lotte Jamsil Super Tower: 550 m tall
- Yongsan IBC: 600 m tall
- Haeundae Resort: Busan
- FKI, Seoul, Korea: 50 ~ 60 Story Office tower
- Turkey Istanbul Mixed-use Project, Istanbul  
450 m tower

# Jamsil Lotte Super Tower

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- Seoul, Korea
- 550 meter tall mixed-use tower  
Competition
- Architect : DeStepanos  
Partners

# Peer Review Project

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- Lamar Tower : Saudia Arabia  
72 story and 64 story towers  
CD Review
- NSC D20/D21.1, Incheon, Korea  
CD review
- NSC BL125, Incheon, Korea  
CD review + VE

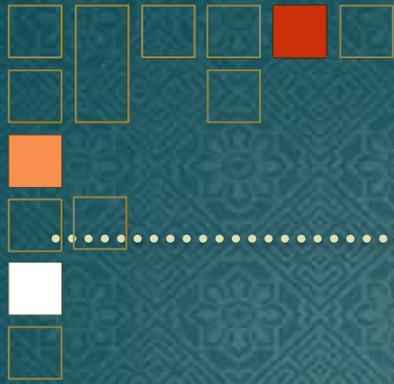


# New Songdo City – Block 125



- 66-story office tower, and retail podiums with multiple basement levels





# Skidmore, Owings & Merrill Chicago

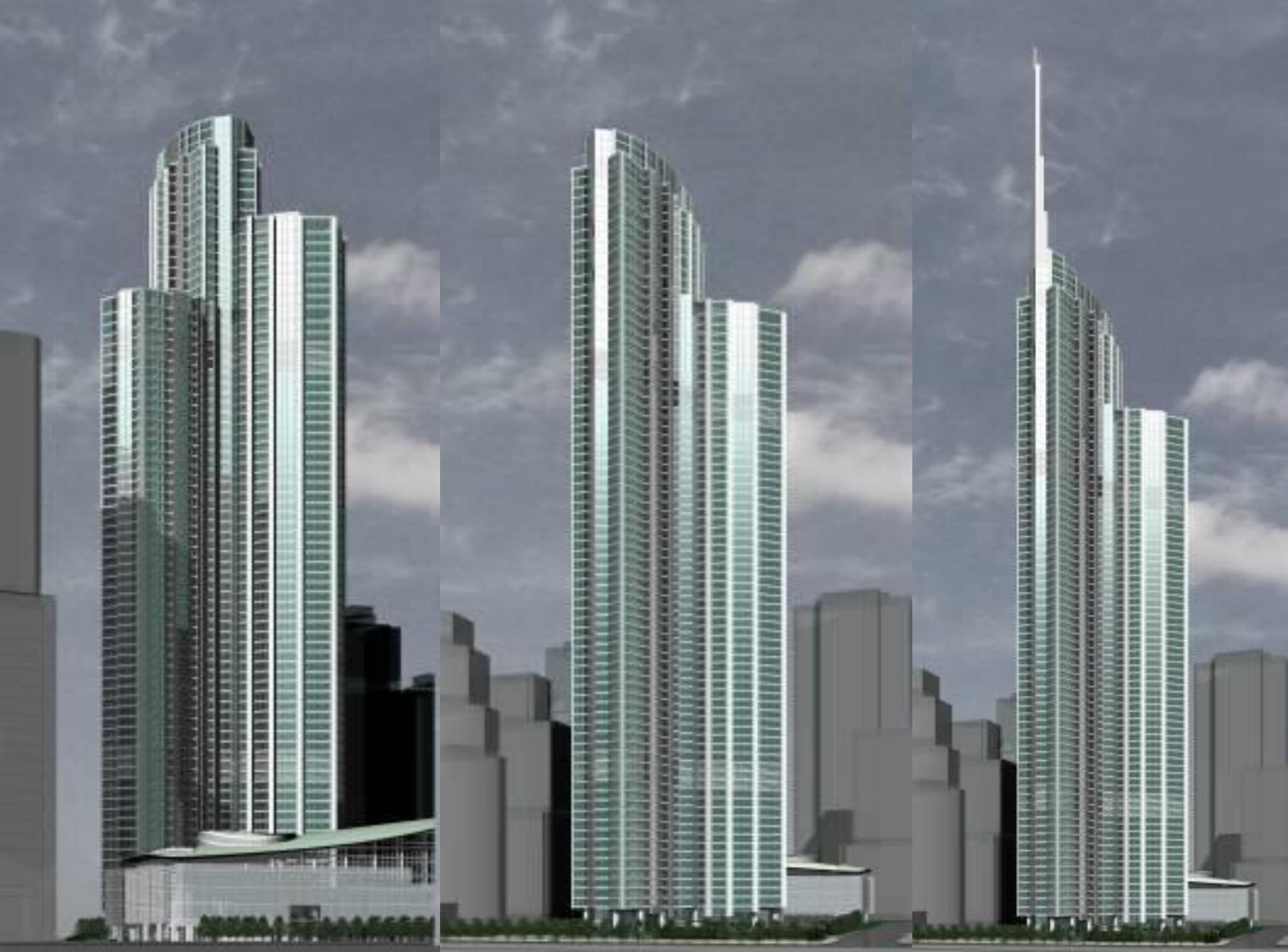
1999. 8 ~ 2002. 11

# Tower Palace III, Seoul, Korea

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- ✿ Residential Tower  
(66 Floors+ 69 Floors)
- ✿ Current Tallest Building In Korea
- ✿ Completed in 2004



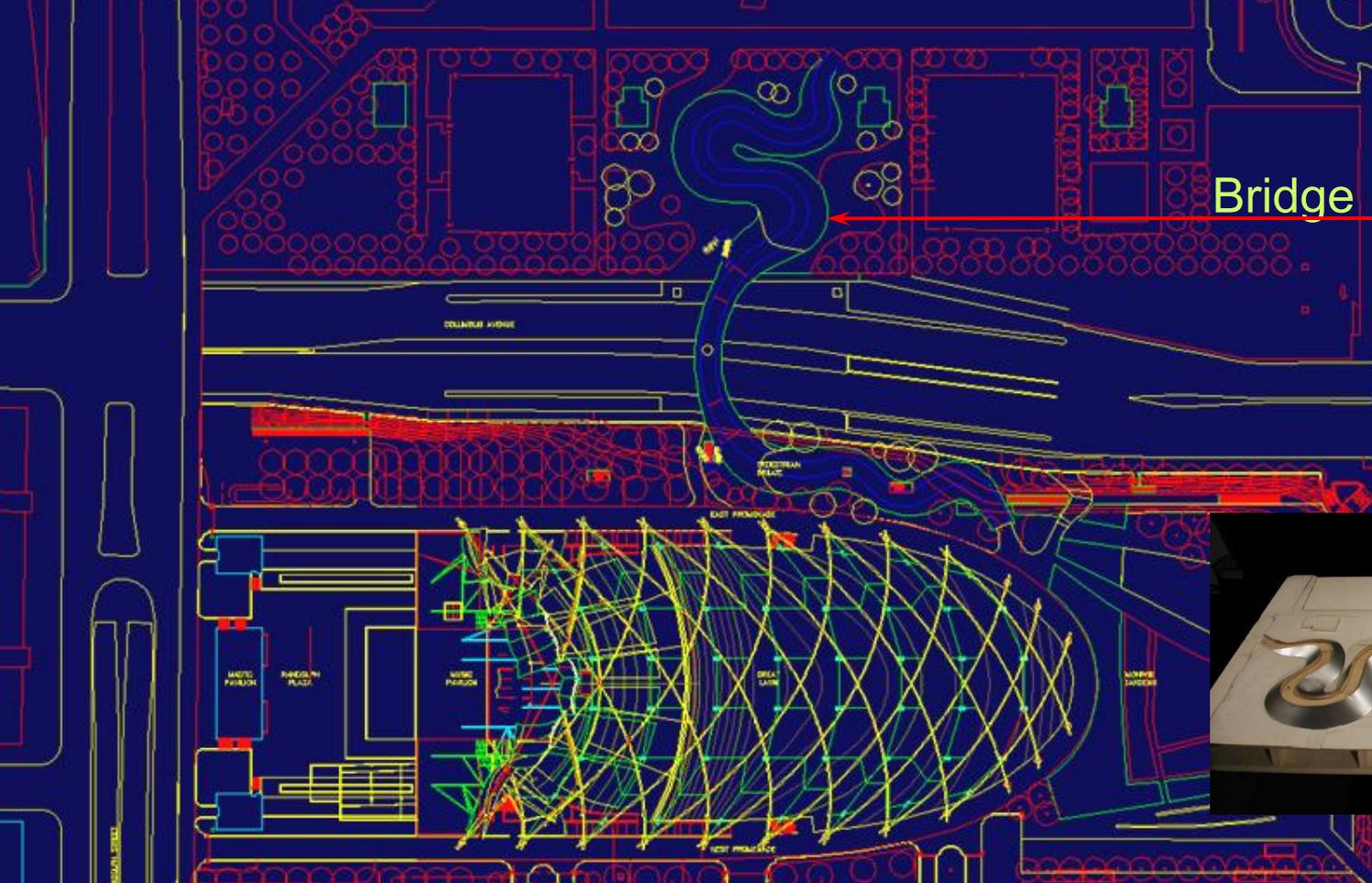
# Millennium Park Project



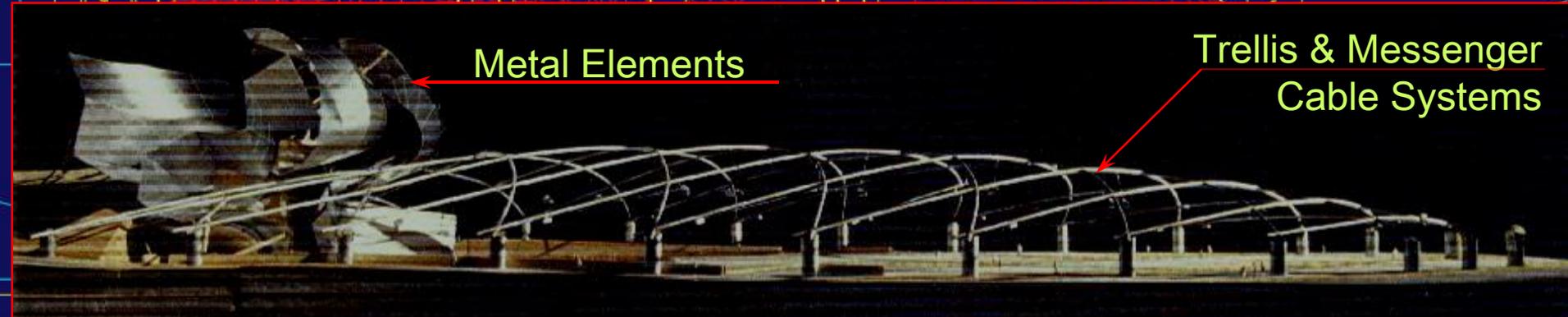
## Music in the Park

By A. Abdelrazaq, P.E., S.E., H. Iyengar, P.E., S.E., C. Rockey, S.E., R. Sinn, P.E., S.E., and J. Zils, P.E., S.E.

Architect



Bridge



Metal Elements

Trellis & Messenger Cable Systems

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**DeSimone Consulting Engineers**  
**New York**

2003.2 ~ 2005.9

# St. Coletta, Washington DC

- Architect: *Michael Graves & Associates* .....
- *Structural Steel Braced Frame*



**The Michael Graves & Associates plan for the St. Coletta school — primarily serving mentally disabled children — drew criticism from some residents in the school's Capitol Hill neighborhood.**

# Flushing Town Center, Flushing NY

- Architect: *Perkins Eastman*
- \$600 million project.
- three-story retail and parking base, apartments
- Transfer Structural Steel Truss



# Hotel Grace, 125 West 45<sup>th</sup> Street, New York

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- ◆ Hotel Renovation
- ◆ New Mezz. Framing for SPA
- ◆ Steel Dunnage for WaterTank
- ◆ Architect: *ROY Architect*

# High-rise Building Design Approach

## Special Lecture at Seoul City University



Simon Shim, P.E.  
Senior Associate

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