ecobuild® america

Sustainable, Green and High-Performance Solutions for the Built Environment

AEC—ST® Science & Technology

Science & Technology for Architecture, Engineering & Construction

NBIMS - Project Methodologies

- Kimon Onuma - Onuma, Inc. - IFC

Requirements Definition
Information Delivery Manual (IDM)

Solution Design
Model View Definition (MVD)

Software Implementation & Certification

BIM Validation and Use in Projects

IFC
Model Schema

IFD
Terminology/Ontology

I.F.C.

Industry Foundation Classes

Standards

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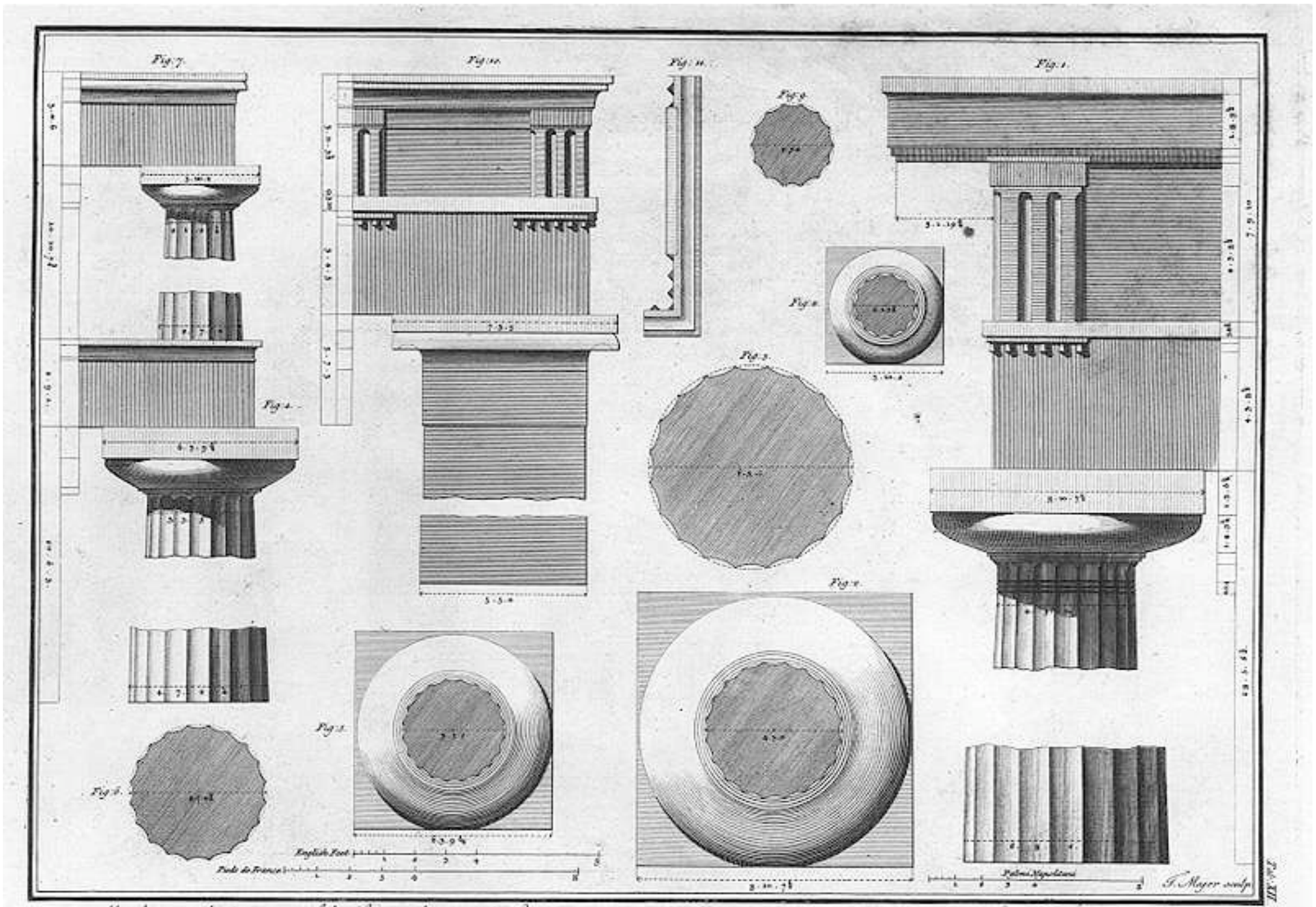

Members and Measures of the Hexastyle Ipetral Temple.

Differentes Parties & les Mesures du Temple Hexastyle Ipetre.

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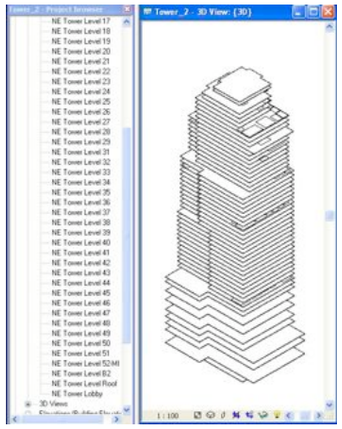
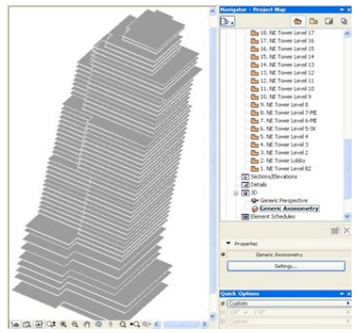
“What BIM platform should we use?”

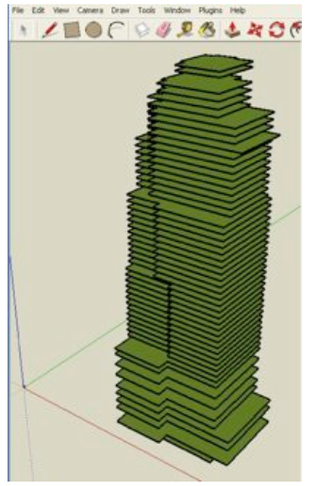


Revit



Archicad

VectorWorks

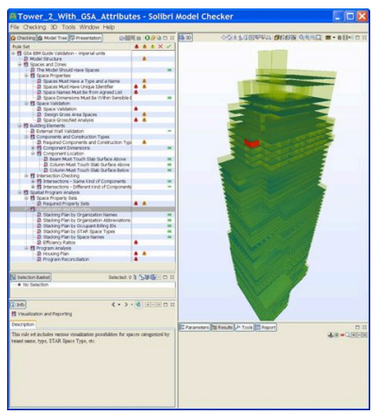


SketchUp

Google Earth

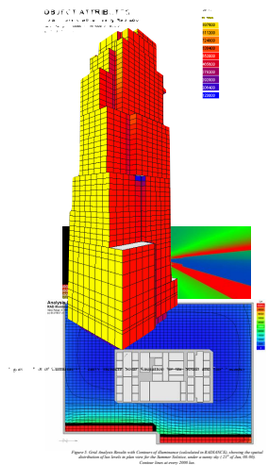
Space Name	Floor Number	Space Area
Offices	40	4500
Conference	40	2300
Gym	39	13450
Training	39	2400
Storage	39	400
Retail	1	7600
Restaurant	1	12800
Lobby	1	6700
Total SF		622,173

Excel

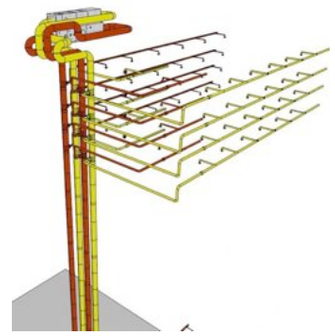


Solibri

OPS



Ecotect



DDS CAD

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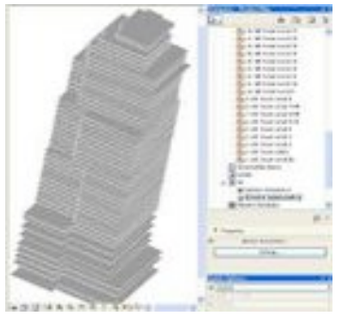
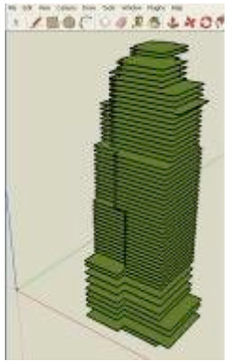


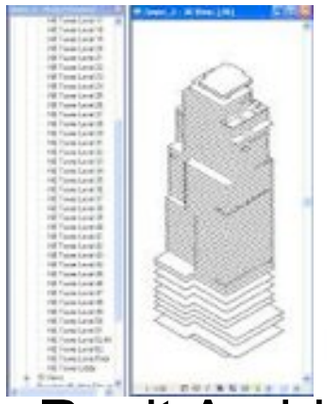
Archicad
IFC

VectorWorks
IFC

DProfiler



SketchUP
IFC



Revit Architecture
& Structure - IFC

DDS-CAD - IFC

Onuma Planning System
IFC

Solibri - IFC

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Who Owns The BIM?

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It is NOT One BIM

BIM STORM

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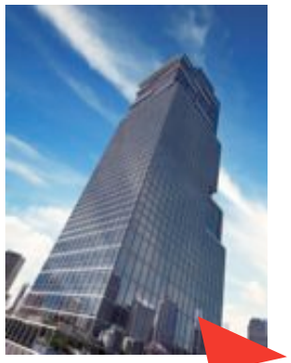
Architect

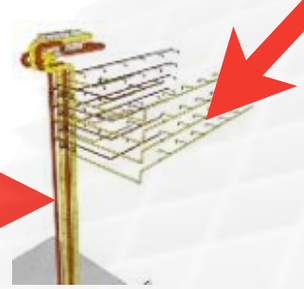


Arch.

Contractor

One Standard

Engineer



Mech.

Struct.

Engineer

Many BIMs

BIM STORM

©ONUMA.com

Architect

Contractor

Engineer

Engineer

Accessible to All

©ONUMA.com

Public

Architect

Contractor

Facility Manager

Emergency Services

Engineer

Engineer

Accessible to All

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420 I.F.C. BIMS
24 hours

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BIM STORM LAX

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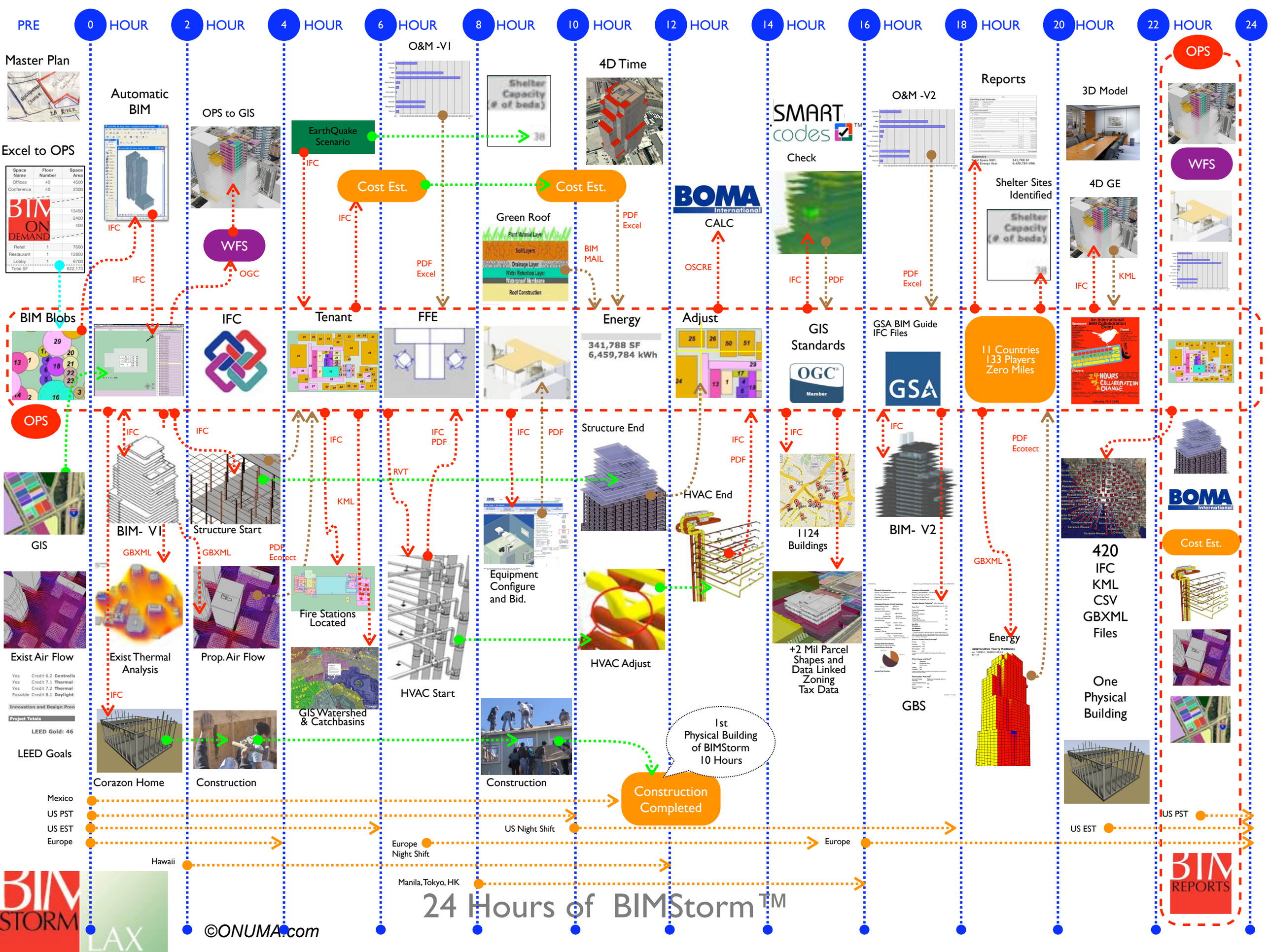

PRE
0 HOUR
2 HOUR
4 HOUR
6 HOUR
8 HOUR
10 HOUR
12 HOUR
14 HOUR
16 HOUR
18 HOUR
20 HOUR
22 HOUR
24
Master Plan
Excel to OPS
Space Name
Floor Number
Space Area
Offices 40 4500
Conference 40 2300
13450
2400
400
Retail 1 7600
Restaurant 1 12800
Lobby 1 6700
Total SF 622,173
BIM ON DEMAND
Automatic BIM
IFC
OPS to GIS
WFS
OGC
EarthQuake Scenario
IFC
Cost Est.
IFC
O&M -V1
Shelter Capacity (# of beds)
38
Cost Est.
Green Roof
Plant Material Layer
Soil Layers
Drainage Layer
Water Retention Layer
Waterproof Membrane
Roof Construction
PDF Excel
4D Time
PDF Excel
BIM MAIL
BOMA International
CALC
OSCRE
SMART codes
Check
IFC
PDF
O&M -V2
PDF Excel
Reports
Shelter Sites Identified
Shelter Capacity (# of beds)
38
3D Model
4D GE
IFC
KML
OPS
WFS
BIM Blobs
OPS
IFC
Tenant
FFE
Energy
341,788 SF
6,459,784 kWh
Adjust
GIS Standards
OGC Member
GSA BIM Guide IFC Files
GSA
11 Countries
133 Players
Zero Miles
24 HOURS of COLLABORATION & CHANGE
IFC
IFC
IFC
IFC
PDF
IFC
PDF
Structure End
IFC
PDF
IFC
IFC
PDF Ecotect
GIS
BIM- V1
Structure Start
KML
RVT
HVAC End
1124 Buildings
BIM- V2
420
IFC
KML
CSV
GBXML
Files
BOMA International
Cost Est.
GBXML
GBXML
PDF Ecotect
Exist Air Flow
Exist Thermal Analysis
Prop. Air Flow
Fire Stations Located
Equipment Configure and Bid.
HVAC Adjust
+2 Mil Parcel Shapes and Data Linked Zoning Tax Data
GBS
Energy
One Physical Building
Yes Credit 6.2 Controlla
Yes Credit 7.1 Thermal
Yes Credit 7.2 Thermal
Possible Credit 8.1 Daylight
Innovation and Design Proc
Project Totals
LEED Gold: 46
LEED Goals
IFC
GIS Watershed & Catchbasins
HVAC Start
Corazon Home
Construction
Construction
1st Physical Building of BIMStorm 10 Hours
Construction Completed
Mexico
US PST
US EST
Europe
Hawaii
US Night Shift
Europe Night Shift
Manila, Tokyo, HK
Europe
US EST
US PST
BIM STORM
LAX
BIM REPORTS
24 Hours of BIMStorm™
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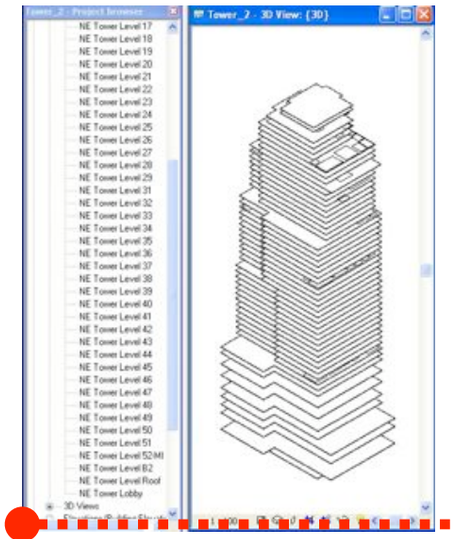
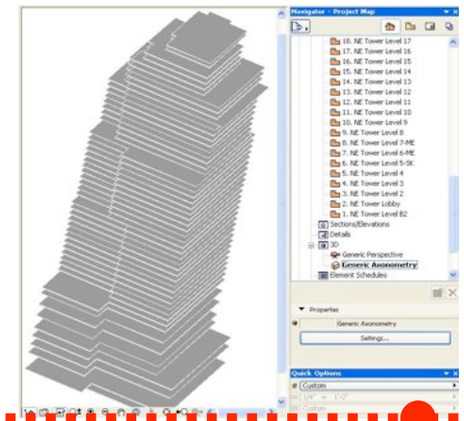
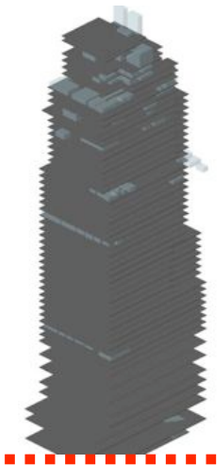
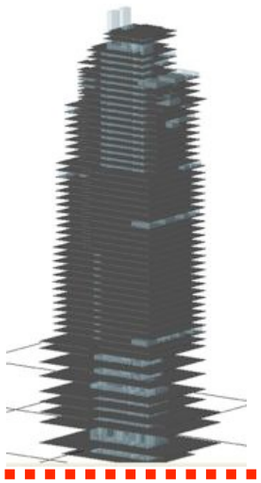
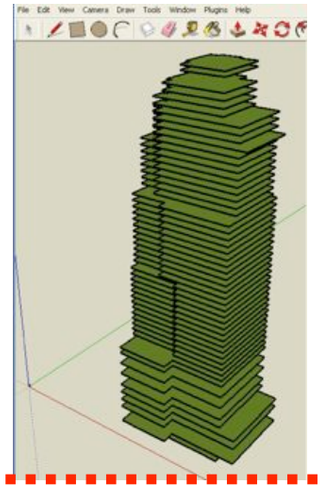
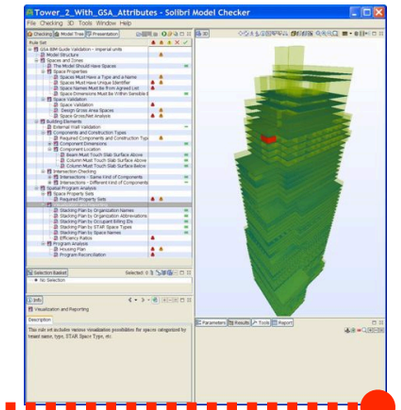


Revit Architecture & Structure - IFC

Archicad IFC

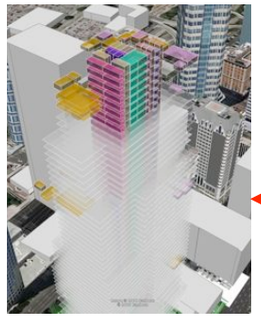
VectorWorks IFC

Nemetshek IFC Viewer

SketchUP IFC

Solibri IFC

Google Earth



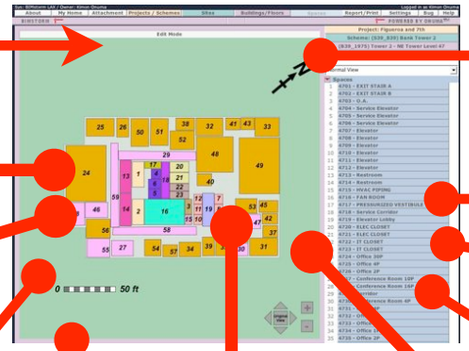
KML

Space Name	Floor Number	Space Area
Offices	40	4500
ce	40	2300
	2	
	39	13450
	39	2400
	39	400
	2	
Retail	1	7600
Restaurant	1	12800
Lobby	1	6700
Total SF		622,173

Excel

IFC

Onuma Planning System
IFC, KML,GBXML, CSV



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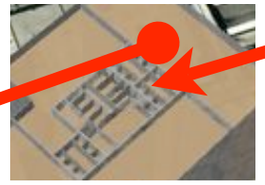
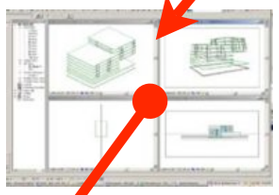


Elite CAD

IFC

Revit



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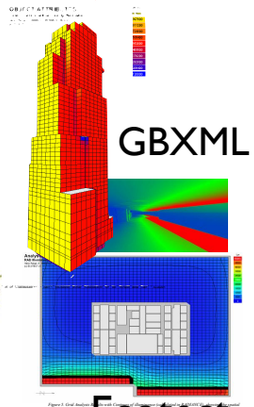
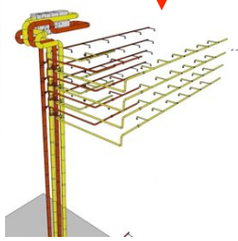


GBXML

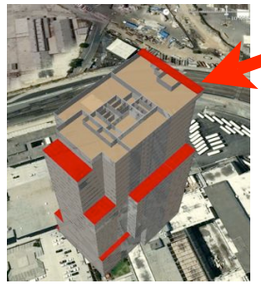
Ecotect

Rhino

IFC

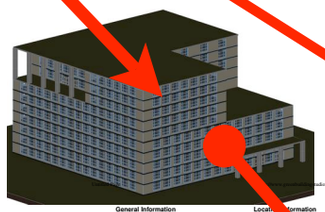


DDS CAD



4D In GE

BIM



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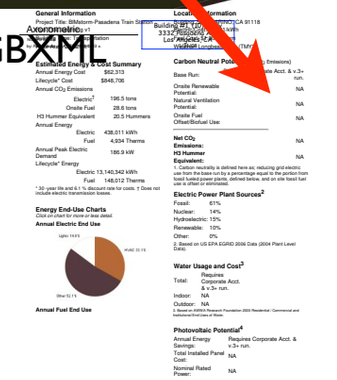
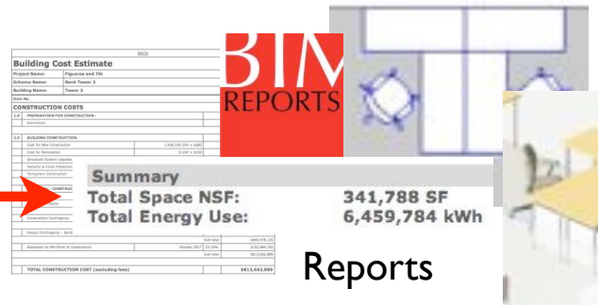


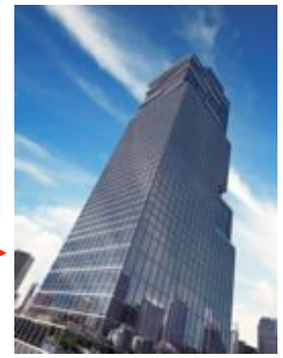
Green Building Studio



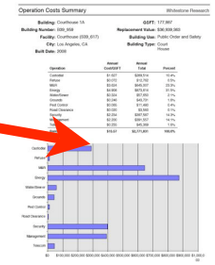
Reports

FFE

IFC



Acusourcing
3D Model
2/20/08



Whitestone
O&M

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