

WELCOME TO: ARCH 2430, BUILDING TECHNOLOGY IV

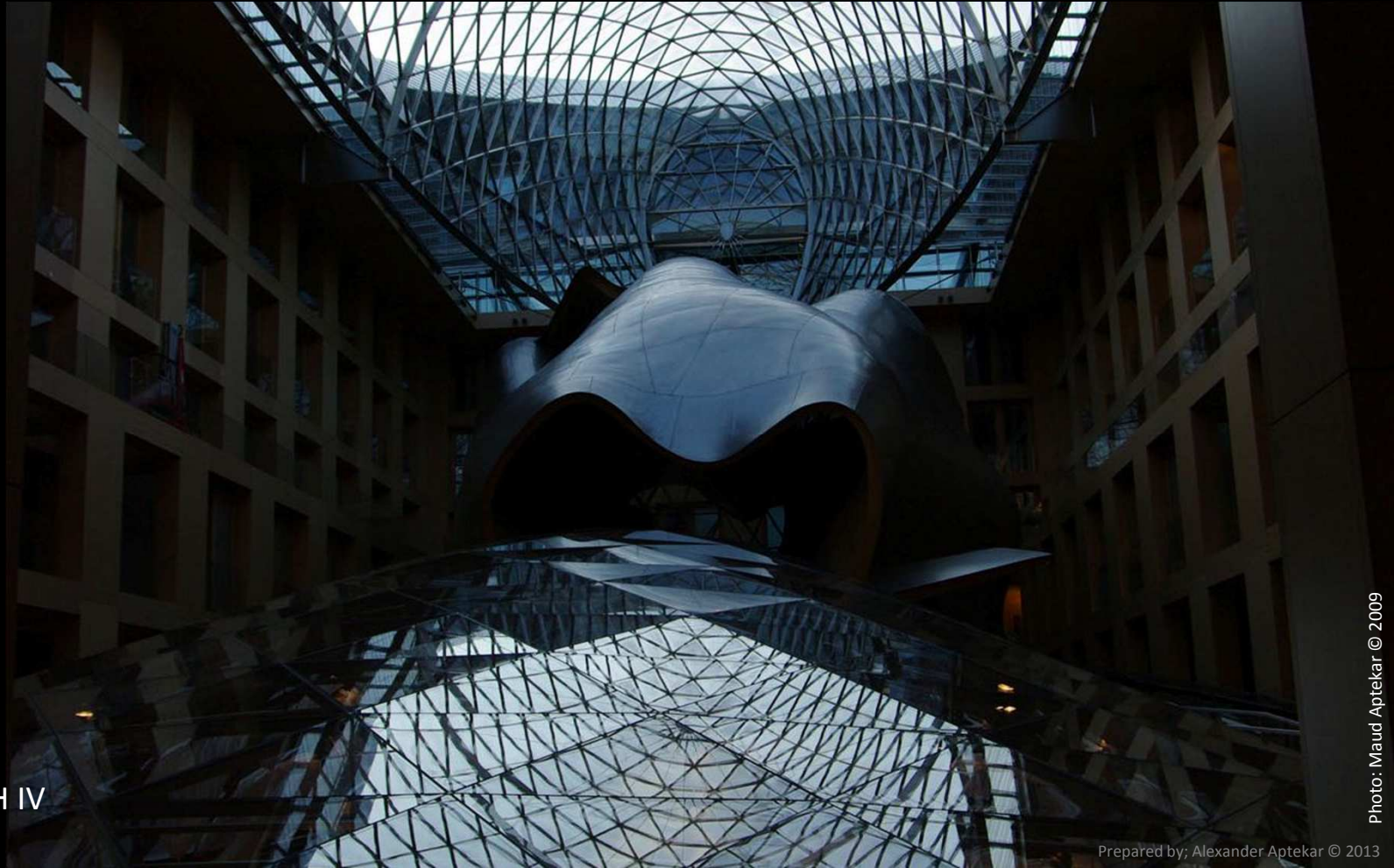


Photo: Maud Aptekar © 2009

BUILDING TECH IV
ARCH 2430

Prepared by: Alexander Aptekar © 2013

A. APTEKAR
C. PORTELLI

PROF. ALEXANDER APTEKAR AIA
[E] AAPTEKAR@CITYTECH.CUNY.EDU

[O]

Wednesday (V834B) & Friday (V812)

8:00 – 8:35am

Monday (V834B) & Tuesdays (V834A)

7:30 – 8:00am and by appointment

CLASS TIME:	WEDNESDAY	8:30AM – 10:30PM	V-834B
	FRIDAY	8:30AM – 10:30PM	V-812

TLC: TLC NAME

TLC EMAIL

TLC HOURS

TLC ROOM NUMBER

PROF. CHARLES PORTELLI
[E] CPORTELLI@CITYTECH.CUNY.EDU

CLASS OBJECTIVES

- THIS COURSE STUDIES THE DEVELOPMENT OF BUILDING SYSTEMS AS THEY OCCUR DURING THE DESIGN DEVELOPMENT PHASE OF ARCHITECTURE. USING CASE STUDY RESEARCH METHODS, STUDENTS ANALYZE FACTORS, SUCH AS BUILDING ASSEMBLIES AND SYSTEMS, CODES AND GOVERNMENT REGULATIONS, HUMAN ERGONOMICS, AND SUSTAINABILITY, THAT AFFECT BUILDING CONSTRUCTION AND USE. THEIR SOLUTIONS TO THESE ISSUES ARE INTEGRATED INTO THEIR FINAL BUILDING DESIGN SOLUTIONS. THE STUDENT CREATES A SERIES OF REPORTS AND A SET OF CONSTRUCTION DRAWINGS USING BOTH ANALOG METHODS (HAND SKETCHING AND DRAWING) AND DIGITAL TOOLS INCLUDING TRADITIONAL CAD SOFTWARE AND BUILDING INFORMATION MODELING TECHNIQUES.
- THIS IS THE 4TH COURSE IN THE REQUIRED SEQUENCE OF FOUR BUILDING TECHNOLOGY SEQUENCE

**1111 LINCOLN ROAD
MIAMI FLORIDA
HERZOG & DE MEURON**



**BUILDING TECH IV
ARCH 2430**

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C. PORTELLI**

COURSE POLICIES:

ACADEMIC INTEGRITY:

STUDENTS AND ALL OTHERS WHO WORK WITH INFORMATION, IDEAS, TEXTS, IMAGES, MUSIC, INVENTIONS AND OTHER INTELLECTUAL PROPERTY OWE THEIR AUDIENCE AND SOURCES ACCURACY AND HONESTY IN USING, CREDITING AND CITATION OF SOURCES. AS A COMMUNITY OF INTELLECTUAL AND PROFESSIONAL WORKERS, THE COLLEGE RECOGNIZES ITS RESPONSIBILITY FOR PROVIDING INSTRUCTION IN INFORMATION LITERACY AND ACADEMIC INTEGRITY, OFFERING MODELS OF GOOD PRACTICE, AND RESPONDING VIGILANTLY AND APPROPRIATELY TO INFRACTIONS OF ACADEMIC INTEGRITY. ACCORDINGLY, ACADEMIC DISHONESTY IS PROHIBITED IN THE CITY UNIVERSITY OF NEW YORK AND IS PUNISHABLE BY PENALTIES, INCLUDING FAILING GRADES, SUSPENSION AND EXPULSION.

COURSE POLICIES:

ATTENDANCE:

- NO MORE THAN 10% ABSENCES ARE PERMITTED DURING THE SEMESTER.
- FOR THE PURPOSES OF RECORD, TWO LATENESS ARE CONSIDERED AS ONE ABSENCE.
- EXCEEDING THIS LIMIT WILL EXPOSE THE STUDENT TO FAILING AT THE DISCRETION OF THE INSTRUCTOR.

COURSE STRUCTURE:

- LECTURES AND LAB WORK.
- ASSIGNMENTS INCLUDE A SERIES OF REPORTS, CLASS PRESENTATION, SKETCHING, QUIZZES AND SET OF CONSTRUCTION DRAWINGS.
- DIGITAL TOOLS LEARNED IN PRIOR BUILDING TECHNOLOGY COURSES ARE REINFORCED.

COURSE POLICIES:

GRADING:

- 60% COMPREHENSIVE DRAWING SET
(INCLUDING MIDTERM, PROGRESS AND FINAL SUBMISSIONS)
- 15% STUDIO LAB ASSIGNMENTS (# 01-06)
- 10% RESEARCH ASSIGNMENTS (CONCRETE, CLADDING & DETAILS)
- 10% SKETCHING ASSIGNMENTS ((SK) & REDLINES (STUDENT REDLINES))
- 5% CLASS PARTICIPATION

TERM PROJECT / ASSIGNMENTS:

EACH STUDENT IS RESPONSIBLE FOR TURNING IN AN ASSIGNMENT EVEN IF ABSENT THE DAY THE ASSIGNMENT IS GIVEN. IT IS THE STUDENT'S RESPONSIBILITY TO HAVE THE EMAIL ADDRESS OR TELEPHONE NUMBER OF ANOTHER STUDENT IN THE CLASS, OR TO SPEAK WITH THE INSTRUCTOR WHEN ABSENT. LATE ASSIGNMENTS WILL BE DOWNGRADED 1/3 GRADE FOR EACH CLASS DATE THEY ARE LATE. IF THE ASSIGNMENT DESERVES AN A-, BUT WAS DELIVERED TWO CLASSES LATE, THE STUDENT WILL RECEIVE A B.

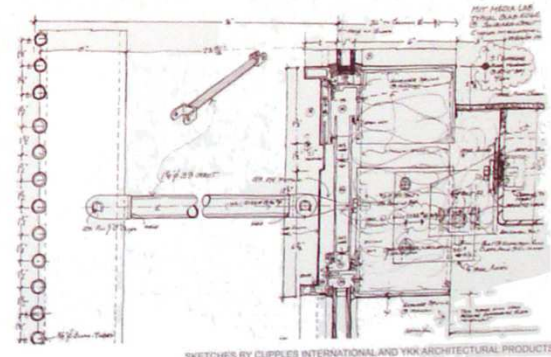
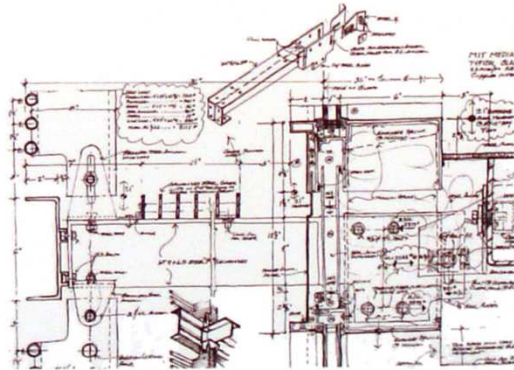
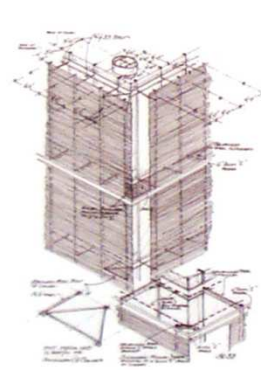
COURSE POLICIES:

COURSE REQUIREMENTS:

THE STUDENT SHOULD SPEND AT LEAST 8 HOURS PER WEEK OUTSIDE OF CLASS TIME PREPARING ASSIGNMENTS BY HAND AND AT THE COMPUTER. COMPUTER LAB HOURS ARE POSTED AFTER THE FIRST WEEK OF CLASSES. THE LAB IS OPEN ON SATURDAYS AND SUNDAYS DURING THE SEMESTER.

DEADLINE NOTE:

UNLESS OTHERWISE INSTRUCTED THE DUE ASSIGNMENTS MUST BE POSTED TO THE CLASS BLACKBOARD WEBSITE BY 10PM ON THE DAY BEFORE THE CLASS MEETS.



SKETCHES BY CUPPLES INTERNATIONAL AND YKR ARCHITECTURAL PRODUCTS

Building technology exhibition 2010; MIT Media Lab, architect Fumihiko Maki



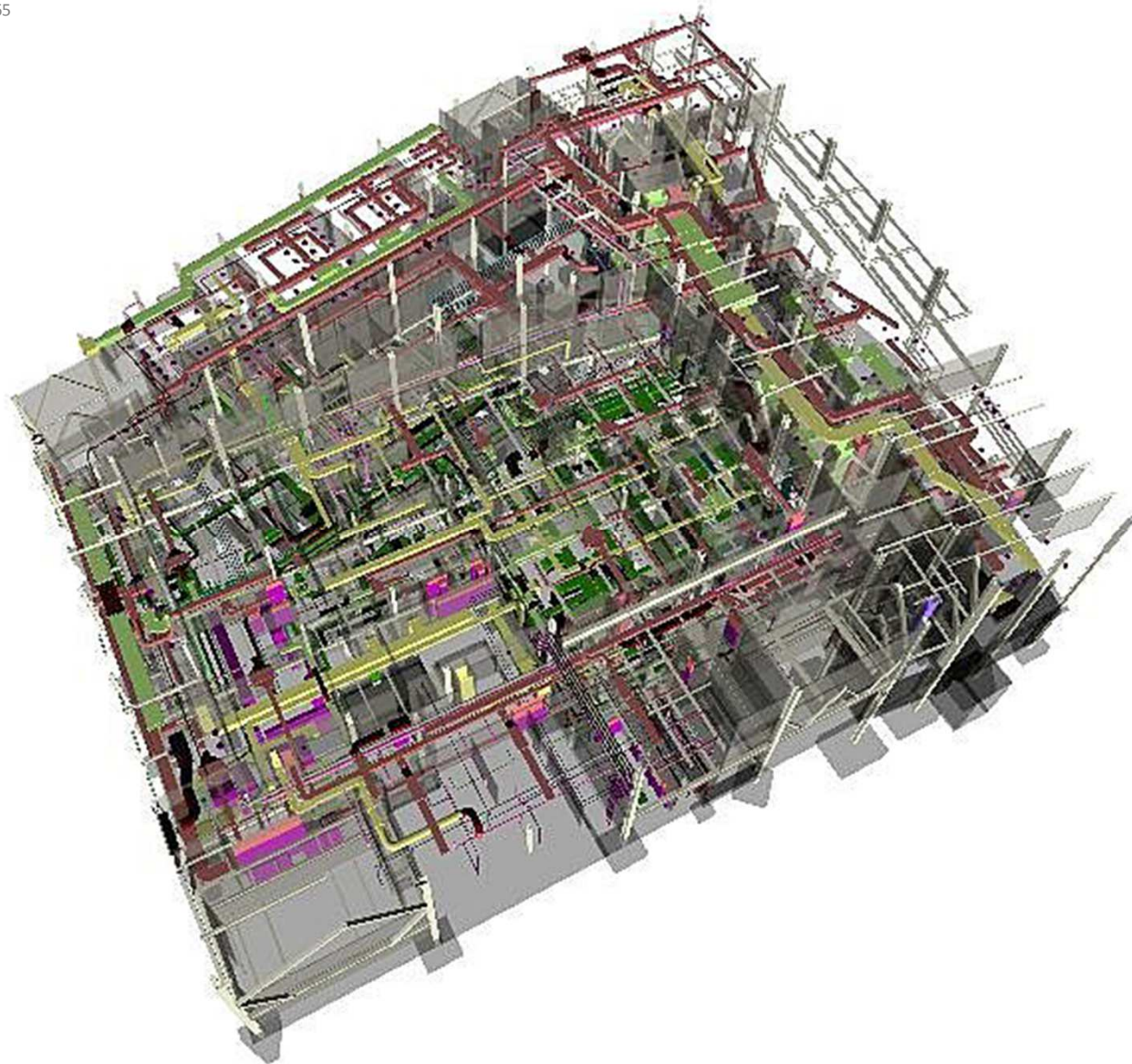
LEARNING OBJECTIVES:

Upon successful completion of this course, the student will:

- **Understand** the process and requirements of developing a design from a schematic concept into design development drawings. (Knowledge)
- **Execute** work through a collaborative process (Gen Ed)
- **Generate** clear and concise talking points to guide oral presentations of lab assignments. (Gen Ed)
- **Understand** the advantages and limitations of BIM (building information modeling) as a tool for design development and project delivery. (Skill)
- **Apply** knowledge of materials and methods of construction, including sustainable principles, to the development of details and assemblies. (Skill)
- **Sketch** and **draft** details in orthographic and 3-D views in analogue and digital media. (Skill)
- **Design** and **analyze** exterior wall system based on environmental performance.
- **Apply** knowledge of professional construction drawing standards for page composition, title blocks, annotation, and schedules. (Skill)
- **Develop** a professional quality coordinated, edited, and organized set of design development documents for a given building design using BIM and CAD. (Skill)

LEARNING OBJECTIVES:

- **ASSESSMENT** TO EVALUATE THE STUDENTS' ACHIEVEMENT OF THE LEARNING OBJECTIVES, THE PROFESSOR WILL DO THE FOLLOWING
- **REVIEW** STUDENTS' DRAWING AND MODELING WORK WHERE STUDENTS MUST EXHIBIT THEIR VISUAL REPRESENTATION SKILLS (2-D AND 3-D). (LOS: 6, 8, 9)
- **ASSESS** THE STUDENTS' USE OF PROFESSIONAL VOCABULARY DURING ORAL PRESENTATIONS.(LO:3)
- **REVIEW** THE EFFECTIVENESS OF STUDENT TEAM ORGANIZATION AND THEIR MANAGEMENT OF THE PROJECT WORK BY FREQUENT MEETINGS. (LO: 2)
- **INSPECT** STUDENT SUBMISSIONS FOR THE EFFICIENT AND EFFECTIVE USE OF BIM TOOLS. (LO: 4)
- **CONFIRM** THE PROPER COORDINATION OF THE STUDENTS' SUBMITTED DRAWING SETS. (LO: 9)
- **REVIEW** THE QUALITY AND ACCURACY OF THE STUDENTS' SUBMITTED ANALOGUE AND DIGITAL MODELS OF CONSTRUCTION ASSEMBLIES (LOS: 6, 7)
- **REVIEW** THE EFFECTIVENESS OF THE DESIGN AND THE ACCURACY OF THE ANALYSIS OF THE ENVIRONMENTAL PERFORMANCE OF THE SUBMITTED EXTERIOR WALL SYSTEM. (LOS: 5, 7)
- **COMPARE** THE CONTENT AND QUALITY OF FINAL SUBMISSION OF THE DESIGN DEVELOPMENT SET TO A SPECIFIC PROFESSIONAL STANDARD. (LOS 1, 8, 9)



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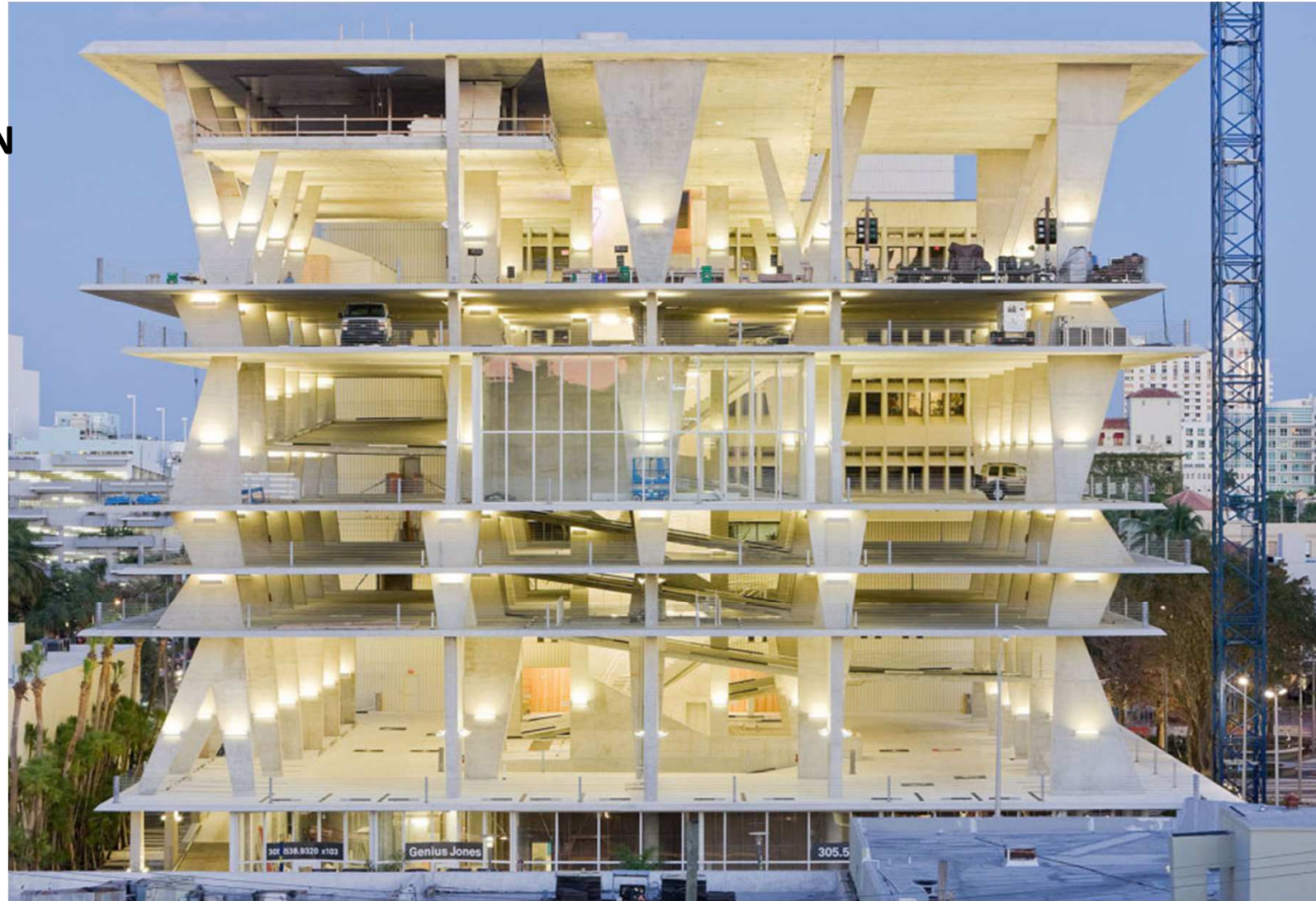
CLASS SYLLABUS

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**1111 LINCOLN ROAD
MIAMI FLORIDA
HERZOG & DE MEURON**

www.productionparadise.com/showcasemiami-issue-211-3831111-lincoln-road-12158.html



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ASSIGNMENTS:

SKETCHES:

- SITE PLAN
- CONCRETE CONSTRUCTION
- CURTAIN WALL DETAILS
- FAÇADE DETAILS

RESEARCH:

- CONCRETE SYSTEMS
- CLADDING SYSTEMS
- CLADDING DETAILS

GROUP PROJECT:

- DEVELOP A BUILDING USING CONCRETE STRUCTURAL SYSTEM(S) AND FAÇADE COMPONENT(S) BY MEANS OF A BIM DELIVERABLE

ASSIGNMENTS:

SKETCHES:

- SITE PLAN
- CONCRETE CONSTRUCTION
- CURTAIN WALL DETAILS
- FAÇADE DETAILS

SKETCH DELIVERABLES AND FORMAT:

- EACH STUDENT IS TO COMPOSE 1 – 2 CLEAR HAND SKETCHES IDENTIFYING A DETAILS AND / OR COMPONENTS OF BUILDING
- EACH SKETCH SHOULD BE ON AN 8.5” X 11” SHEET AND UPLOADED TO GTEAM SITE



SKETCHES:

Rubric

Name **Sketch Drawings**
 Description **This rubric is designed for grading sketch assignments that focused on understanding the subject of the sketch.**

Rubric Detail

Criteria	Levels of Achievement				
	Novice	Developing	Competent	Proficient	Excellent
Observation Weight 34.00%	5 % shows no understanding of the subject	40 %	80 %	90 % clearly sketches the critical components of the subject	100 %
Choice of View Weight 33.00%	0 % -inappropriate location -wrong subject matter sketched	40 % -shows little of the subject matter poor example	80 %	90 % -excellent example -shows the components and component connections	100 %
Technique Weight 18.00%	10 % -incomplete	40 % -poor line weight -scale inaccurate	80 %	90 % -technically precise uses correct perspective	100 %
Location Title Notes Weight 15.00%	0 % no information	40 % -incomplete	80 %	90 % -describes location, drawing idea and titles the drawing	100 %

ASSIGNMENTS:

RESEARCH:

- CONCRETE SYSTEMS
- CLADDING SYSTEMS
- CLADDING DETAILS

RESEARCH DELIVERABLES AND FORMAT:

- EACH GROUP IS TO DELIVER AN INDEPTH PRESENTATION IDENTIFYING THE USE, ASSEMBLY, CONSTRUCTION, AND DETAILS OF THE SYSTEM BEING RESEARCHED. THE PRESENTATION WILL CONTAIN DETAILS, IMAGES, DRAWINGS, SKETCHES, AND MODELS
- EACH PRESENTATION WILL BE IN PPT OR PDF FORMAT AND UPLOADED TO THE GTEAM SITE

ASSIGNMENTS:

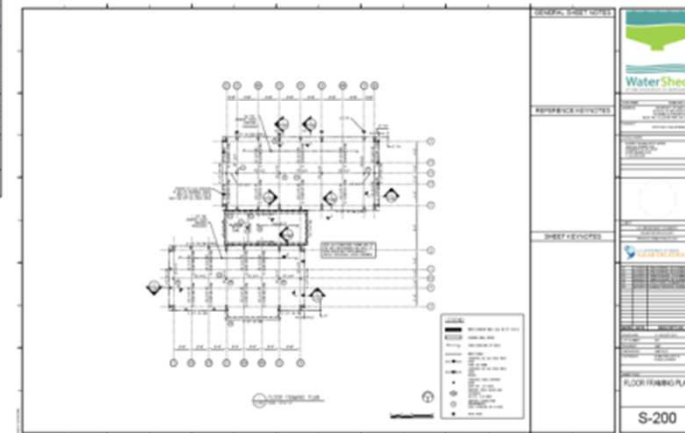
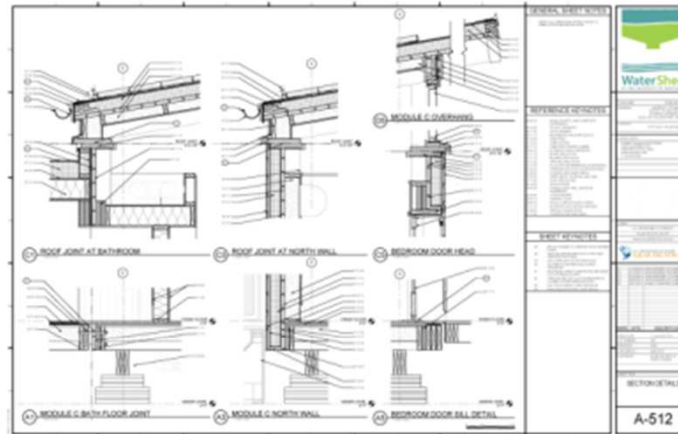
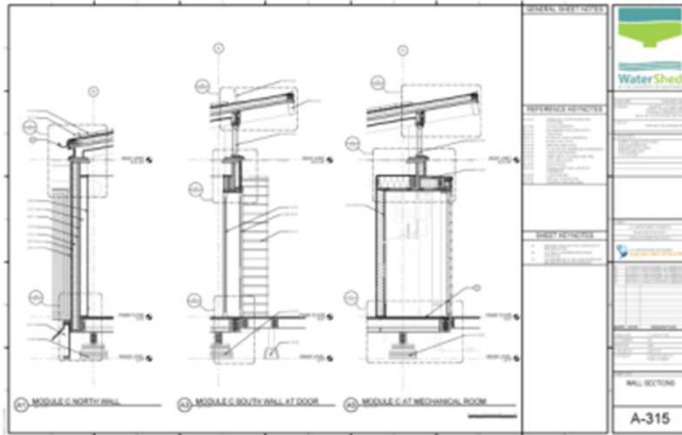
GROUP PROJECT:

- THE SEMESTER PROJECT WILL BE A MULTI-STORY CONCRETE STRUCTURE MULTI USE BUILDING.
- AS IN THE ARCHITECTURAL OFFICE, THIS COURSE REQUIRES YOU THE STUDENT TO COMPLETE A VARIETY OF TASKS IN ORDER TO ACCOMPLISH THE ULTIMATE PROJECT - A SET OF CONSTRUCTION DRAWINGS FOR A COMMERCIAL CONCRETE MIXED-USE BUILDING WITH A CURTAIN WALL ENCLOSURE. THE SCHEDULE IS COMPLEX AND DEMANDING- JUST LIKE THE PROFESSIONAL OFFICE.
- THE PROJECT WILL CONCENTRATE ON THE CREATION OF APPROXIMATELY 40 SHEETS OF CONSTRUCTION DRAWINGS (CD'S) CONFORMING TO INDUSTRY STANDARDS AND COURSE REQUIREMENTS.
- EACH GROUP IS RESPONSIBLE TO DEVELOP A BUILDING UTILIZING A CONCRETE STRUCTURAL SYSTEM(S) AND VARIOUS FAÇADE ENCLOSURE SYSTEM(S).
- THE END DELIVERABLE WILL BE A BUILDING INFORMATION MODEL, A PHYSICAL MODEL, AND A DIGITAL COPY OF A DETAILED DRAWING SET

ASSIGNMENTS:

INSERT EXAMPLES OF PREVIOUS WORK
LIST PROJECT BRIEF

GROUP PROJECT:



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ASSIGNMENTS:

GROUP PROJECT:

**MEDIA ARTS AND SCIENCES
BUILDING, MAKI AND
ASSOCIATES, MIT, CAMBRIDGE,
MASS. 2010**

Photo: Alexander Aptekar © 2010



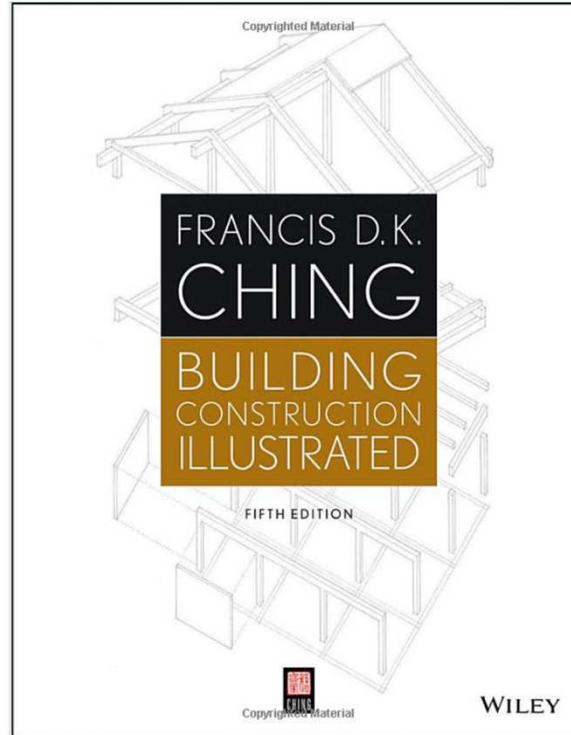
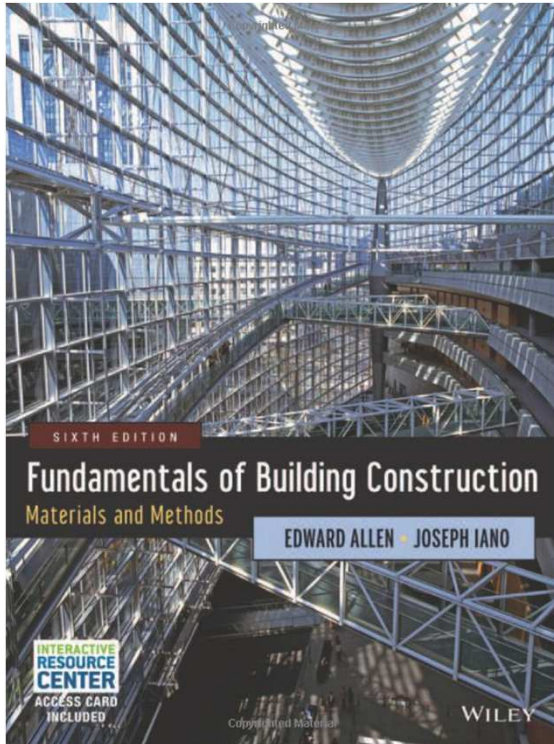
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RESOURCES

REQUIRED TEXT BOOKS:

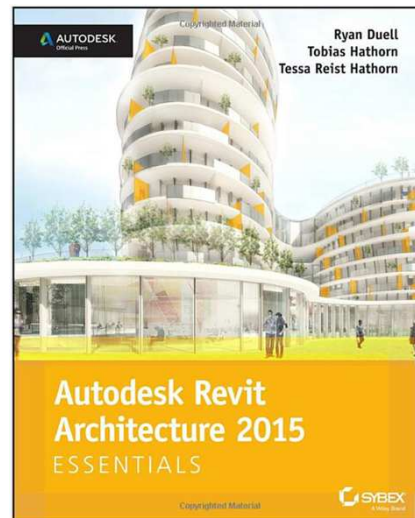
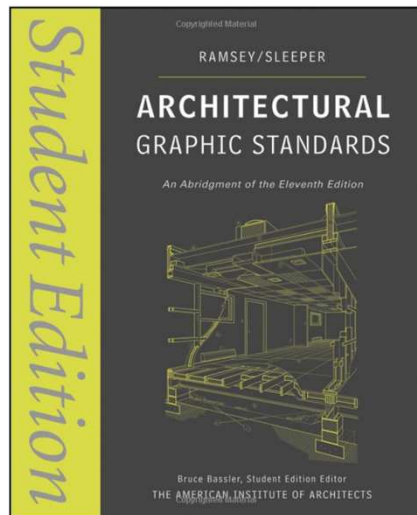
- Allen, Edward and Joseph Iano. [Fundamentals of Building Construction / Materials and Methods](#). John Wiley and Sons, 2008.
- Ching, Francis. [Building Construction Illustrated](#). John Wiley and Sons, 2008.



RESOURCES

RECOMMENDED TEXT BOOKS:

- R Ramsey, Charles George, Harold Reeve Sleeper, and Bruce Bassler. [Architectural Graphic Standards: Student Edition \(Ramsey/Sleeper Architectural Graphic Standards Series\)](#). John Wiley and Sons, 2008.
- Ryan Duell, Tobias Hathorn, Tessa Reist Hathorn. [Autodesk Revit Architecture 2015 Essentials](#): Publisher: Sybex; 1 edition 2014.
- Edward Allen, Joseph Iano. [The Architect's Studio Companion: Rules of Thumb for Preliminary Design](#), Wiley; 5 edition



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RESOURCES

WEB RESOURCES:

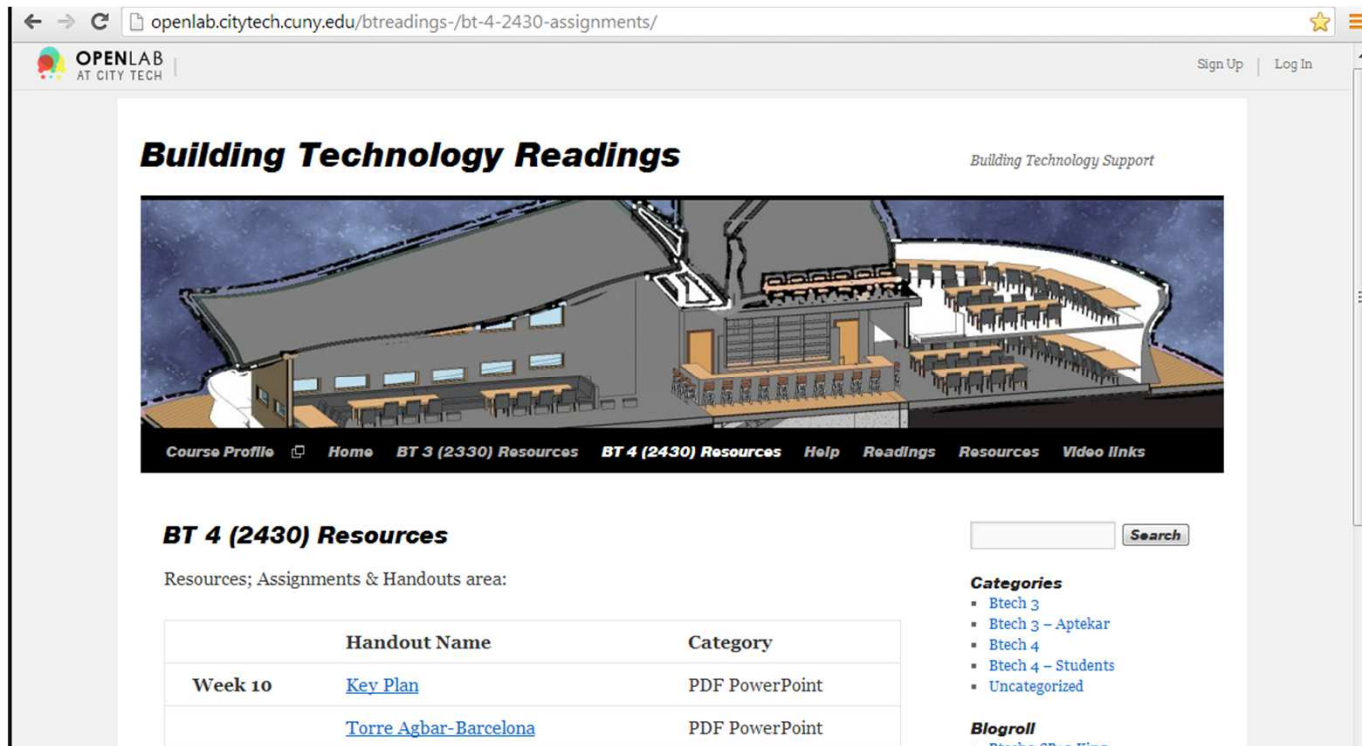
OPEN LABS: <http://openlab.citytech.cuny.edu/btreadings-/bt-4-2430-assignments/>

GTEAM: <http://www.gteam.com/>

RESOURCES

WEB RESOURCES:

OPEN LABS: <https://openlab.citytech.cuny.edu/bt32014f/assignments/>



The screenshot shows a web browser window with the URL openlab.citytech.cuny.edu/btreadings-/bt-4-2430-assignments/. The page title is "Building Technology Readings" and it includes a sub-header "Building Technology Support". A large architectural rendering of a modern building interior is featured. Below the rendering is a navigation menu with items: "Course Profile", "Home", "BT 3 (2330) Resources", "BT 4 (2430) Resources", "Help", "Readings", "Resources", and "Video Links". The main content area is titled "BT 4 (2430) Resources" and includes a search bar and a list of categories: "Btech 3", "Btech 3 - Aptekar", "Btech 4", "Btech 4 - Students", and "Uncategorized". A "Blogroll" section is also visible.

BT 4 (2430) Resources

Resources; Assignments & Handouts area:

	Handout Name	Category
Week 10	Key Plan	PDF PowerPoint
	Torre Agbar-Barcelona	PDF PowerPoint

Categories

- Btech 3
- Btech 3 - Aptekar
- Btech 4
- Btech 4 - Students
- Uncategorized

Blogroll

- Btech 3 - Aptekar

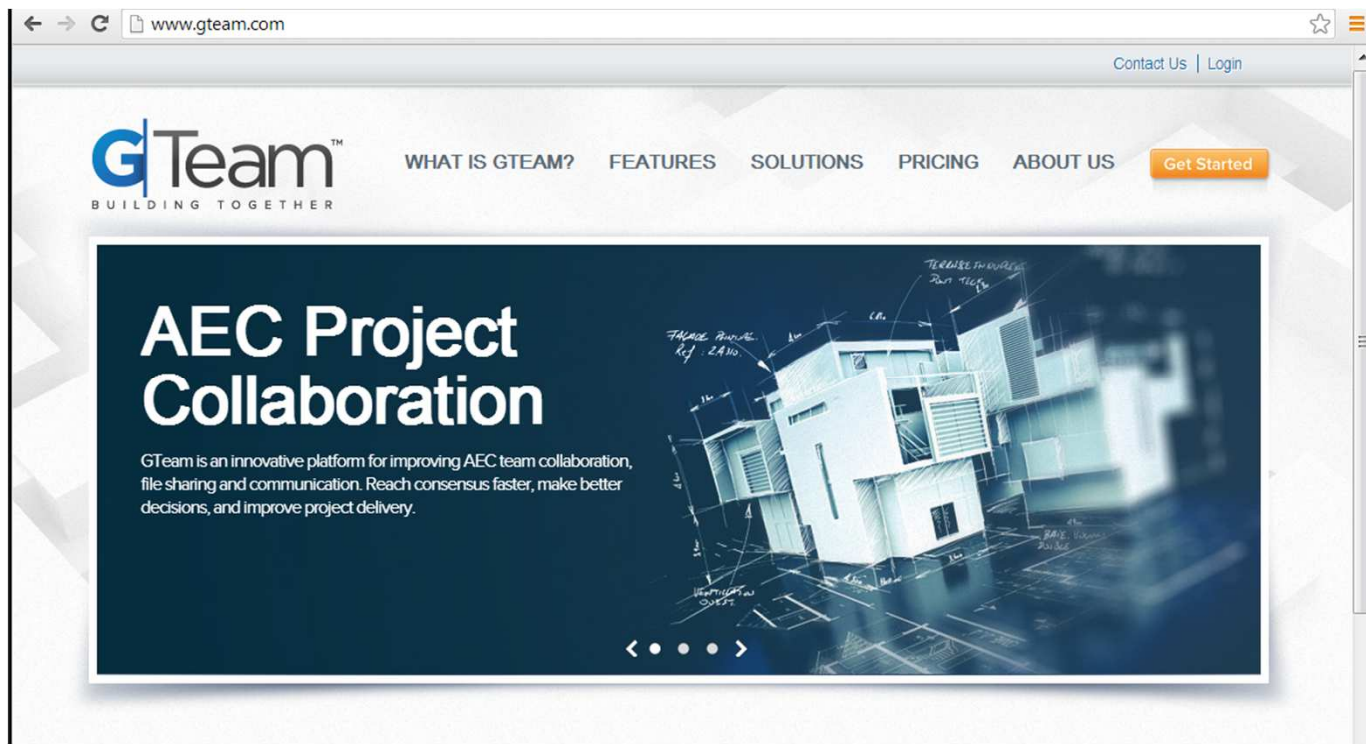
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RESOURCES

WEB RESOURCES:

GTEAM: <http://www.gteam.com/>



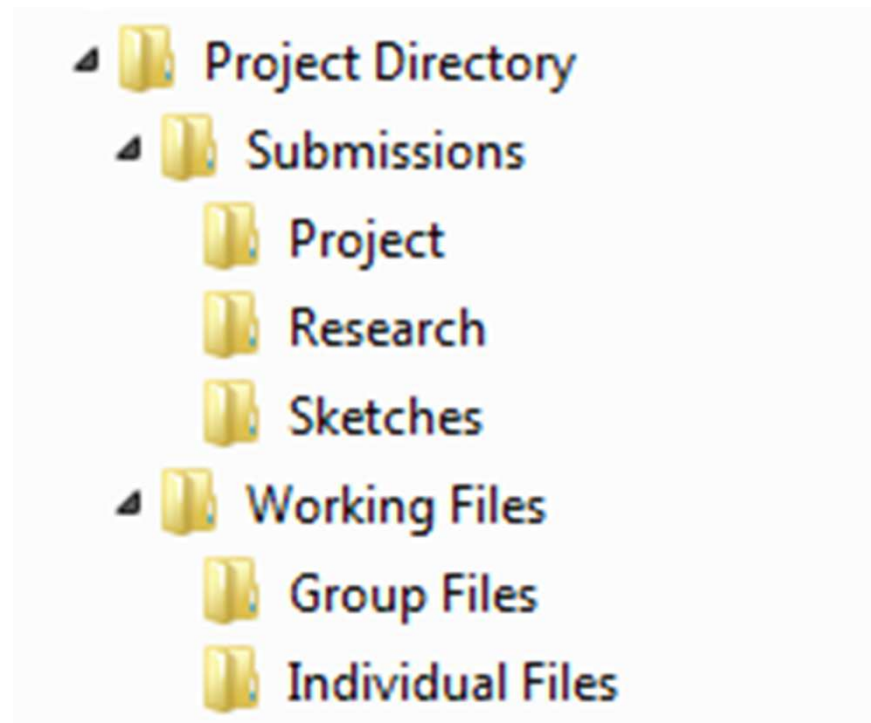
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Folder structure for GTeam

Project Root

❖ SUBMISSIONS:



Folder structure for GTeam

Project Root

❖ SUBMISSIONS:

Project Assignments

- 01site
- 02structure
- etc.

Sketches

- Sk1
- Sk2
- Sk3
- Sk4

Research Projects

- concrete structural systems
- façade systems draft
- façade systems final

Folder structure for GTeam

Project Root

❖ WORKING FILES

Group Files

- Team model [project files]
- Team families [loaded families]

Individual Files

- Name 1 [last name, first name]
- Name 2

FILE NAMING CONVENTIONS

ALL FILE NAMES SHOULD INCLUDE STUDENT'S NAME (LAST THEN FIRST) OR TEAM NAME, ASSIGNMENT NUMBER, ASSIGNMENT NAME, AND DATE (YEAR, MONTH, DAY). THE DATE USED FOR NAMING YOUR ASSIGNMENT SHOULD BE THE DATE THE ASSIGNMENT IS DUE. ALL WORK MUST BE SUBMITTED USING THE SAME VERSION OF REVIT OR AUTOCAD THAT IS INSTALLED IN THE LAB.

DATE_LAST NAME_FIRST NAME_ASSIGNMENT NUMBER / PROJECT NAME

DATE_TEAM NAME_ASSIGNMENT NUMBER / PROJECT NAME

EXAMPLE:

120803_WRIGHT_FRANK_01GRID.DWG

ONLY FILES NAMED APPROPRIATELY WILL BE ACCEPTED. ANY OTHER FORMAT WILL BE REJECTED AND CONSIDERED AS NOT SUBMITTED.

AT THE END OF THE SEMESTER, YOU WILL BE REQUIRED TO SUBMIT YOUR WORK FOR ARCHIVING. THE FILE FORMAT WILL BE DIFFERENT. HERE THE FILE FORMAT WILL INCLUDE COURSE NUMBER, COURSE SECTION, SEMESTER, PROFESSOR'S NAME, PROJECT NAME, DRAWING TITLE, YOUR NAME (LAST THEN FIRST).

EXAMPLES:

ARCH2430_0000_SEMESTER_PROFESSORNAME_PROJECT_XXTITLE_LAST_FIRST.DWG

ARCH2430_9619_FALL_SMITH_PROJECT_03SITEPLAN_TRUBIN_ALEX.DWG

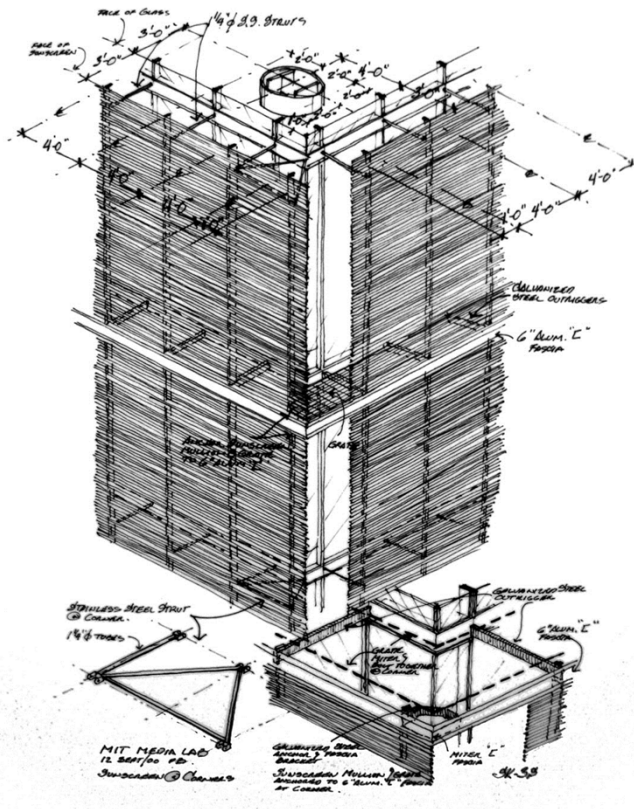
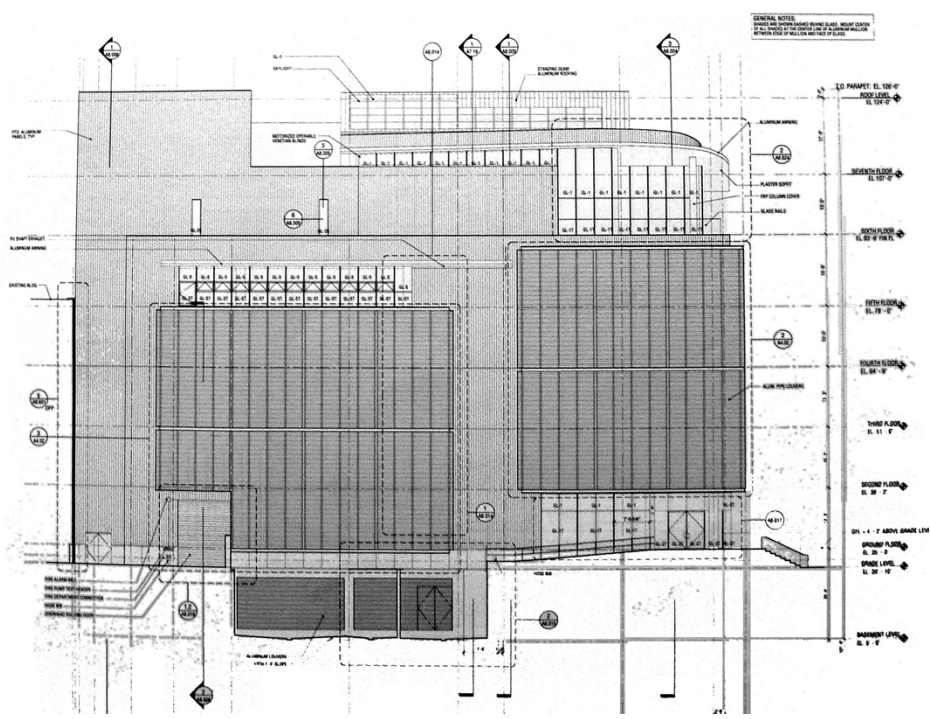
WE WILL DISCUSS THIS REQUIREMENT FURTHER TOWARDS THE END OF THE SEMESTER.

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ASSIGNMENT 1: TITLE BLOCK

THE CLASS WILL BE DIVIDED INTO GROUPS OF THREE; THESE GROUPS WILL BE WORKING TOGETHER THROUGHOUT THE SEMESTER.

EACH STUDENT NEEDS TO CREATE FOUR SKETCHES BASED ON THE INTERVIEW HE/SHE DID OF THE OTHER STUDENT. THESE SKETCHES SHOULD BE BASED ON POSITIVE IDEAS OR THOUGHTS THAT COME TO YOU AFTER CREATING THE INTERVIEW. PAY A PARTICULAR ATTENTION TO THE QUESTIONS ON ARCHITECTURE AND STRENGTHS WHEN CREATING YOUR IMAGES. EACH TEAM MEMBER MUST CREATE 2 TO 5 IMAGES OF AT LEAST 4"X4".

ASSIGNMENT 1: TITLE BLOCK

AFTER CREATING EACH IMAGE, STUDENTS SHOULD POST THESE IMAGES ON A WALL TOGETHER, SO THEY CAN COMBINE ELEMENTS OF AT LEAST TWO DIFFERENT STUDENTS' IMAGES TO CREATE A TEAM LOGO. AFTER CREATING THIS LOGO, IT WILL BE ADDED TO YOUR TEAM TITLE BLOCK.


YOUR TITLE BLOCK IS REQUIRED TO HAVE SEVERAL SPECIFIC THINGS AS PART OF IT. DURING THE DEVELOPMENT OF THIS PROJECT, YOU WILL BE CREATING PARTICULAR AREAS OF THE SAME PROJECT; SPECIFIC AREAS/SECTIONS NEED TO BE AUTHORED BY PARTICULAR STUDENTS, YOU NEED TO HAVE A BOTH YOUR TEAM NAME AND A PLACE TO INDICATE THE SPECIFIC STUDENT RESPONSIBLE FOR THE PARTICULAR SHEET BEING WORKED ON.

PARTS TO BE INCLUDED AND ALWAYS FILLED OUT ON YOUR TITLE BLOCK ARE AS FOLLOWS:

- DRAWN BY:
- CHECKED BY:
- TEAM MEMBERS:
- DATE DRAWN:

ASSIGNMENT 1: TITLE BLOCK

YOUR TEAM'S REVIT TITLE BLOCK SHOULD BE SIZED TO WORK ON AN HORIZONTAL SHEET OF 22"X34". THIS SIZE WILL ALLOW A HALF-SIZE VERSION OF YOUR WORK TO BE PRINTED ON 11"X 17" PAPER. COMPLETE YOUR TITLE BLOCK AND ATTACH YOUR LOGO SKETCHES, PRINT AND POSTS YOUR SHEETS AS PDFS TO THE ASSIGNMENT ON GTEAM.

REVISIONS	
<hr/>	
SHEET TITLE	
FINISH SCHEDULE	
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PHASE:	DD
SCALE:	
DRAWN BY:	
CHECKED BY:	
DATE:	
JOB NO.:	07088.00
SHEET NUMBER	A6.40

east coast 2



HUNTER'S POINT
LONG ISLAND CITY, NY

project 07088.00

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FAX (212) 253-9000
EMAIL: JCATES@ARCHITECTONICA.COM

ARCHITECT
SLICE ARCHITECTS
814 BROADWAY
NEW YORK, NY 10003
CONTACT: ROBERT LANGENSCHEIDER
TEL (212) 979-8600
FAX (212) 979-8587
EMAIL: RLANGENSCH@SLICEARCH.COM

STRUCTURAL ENGINEERS
ROSSENKASSER/GROSSMAN
110 WEST 20TH STREET
NEW YORK, NY 10011
CONTACT: NICHOLE GROSSMAN
TEL (212) 364-2424
FAX (212) 364-6876

M.E.P. ENGINEERS
IN ROBBINS PC
125 WEST 42ND ST STREET
NEW YORK, NY 10018
CONTACT: WY 4438965
TEL (212) 944-5586
FAX (212) 944-5597

LANDSCAPE ARCHITECTURE
WATKINS WELSH
132 BROADWAY, SUITE 1040
NEW YORK, NY 10013
CONTACT: MICHAEL WATKINS
TEL (212) 451-8600
FAX (212) 241-1122

MONITORING LIGHTING DESIGNERS
BLISS FASHAN INC.
125 LESLIE ST
NEW YORK, NY 10013
TEL (212) 242-8940
FAX (212) 242-8740

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DATE	NO.	REVISIONS
12/22/07	1	Initial design
12/22/07	2	Final design
02/22/08	1	Design Development 2007

SHEET TITLE

FINISH SCHEDULE

PHASE: **DD**

SCALE:

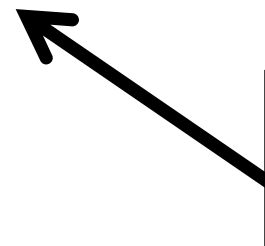
DRAWN BY:

DATE: 

JOB NO.: **07088.00**

SHEET NUMBER

A6.40



A. APTEKAR
C. PORTELLI

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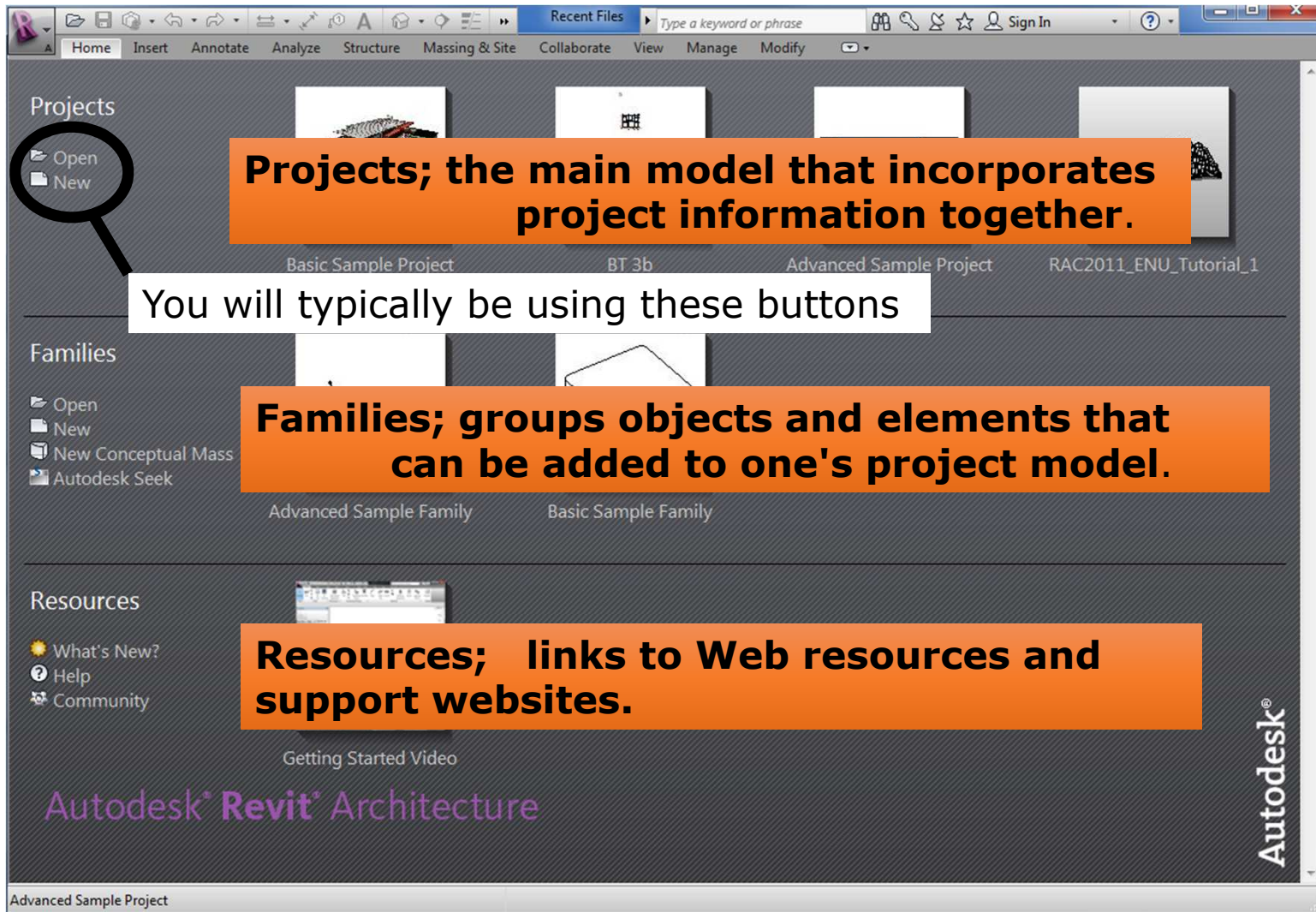
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**BUILDING TECH IV
ARCH 2430**

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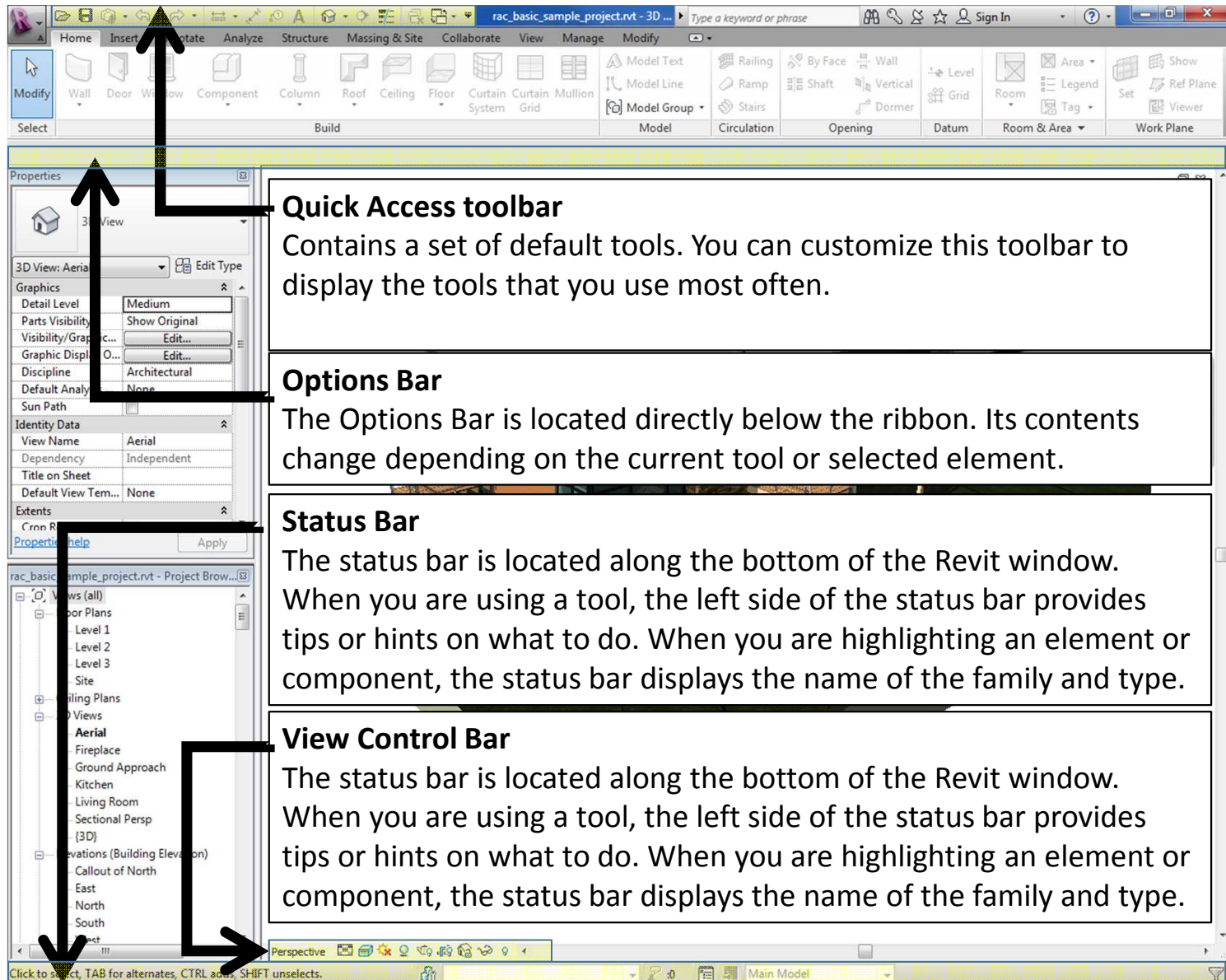
The image shows a screenshot of the Revit software interface. The top ribbon is visible, showing tabs for Home, Insert, Annotate, Analyze, Structure, Massing & Site, Collaborate, View, Manage, and Modify. Below the ribbon, the Properties palette is open, showing various settings for the current view. The Project Browser is also visible, showing a hierarchy of views. Four callout boxes with arrows point to specific elements: the Application button (top left), the Ribbon (top center), the Properties Palette (middle left), and the Project Browser (bottom left).

Application button
The application menu provides access to common file actions, such as New, Open, and Save. It also allows you to manage files using more advanced tools, such as Export and Publish

Ribbon
The ribbon displays when you create or open a file. It provides all the tools necessary to create a project or family.

Properties Palette
The Properties palette is a modeless dialog where you can view and modify the parameters that define the properties of elements in Revit. Typically you keep the Properties palette open during a Revit session.

Project Browser
The Project Browser shows a logical hierarchy for all views, schedules, sheets, families, groups, linked Revit models, and other parts of the current project. As you expand and collapse each branch, lower-level items will display.



Quick Access toolbar

Contains a set of default tools. You can customize this toolbar to display the tools that you use most often.

Options Bar

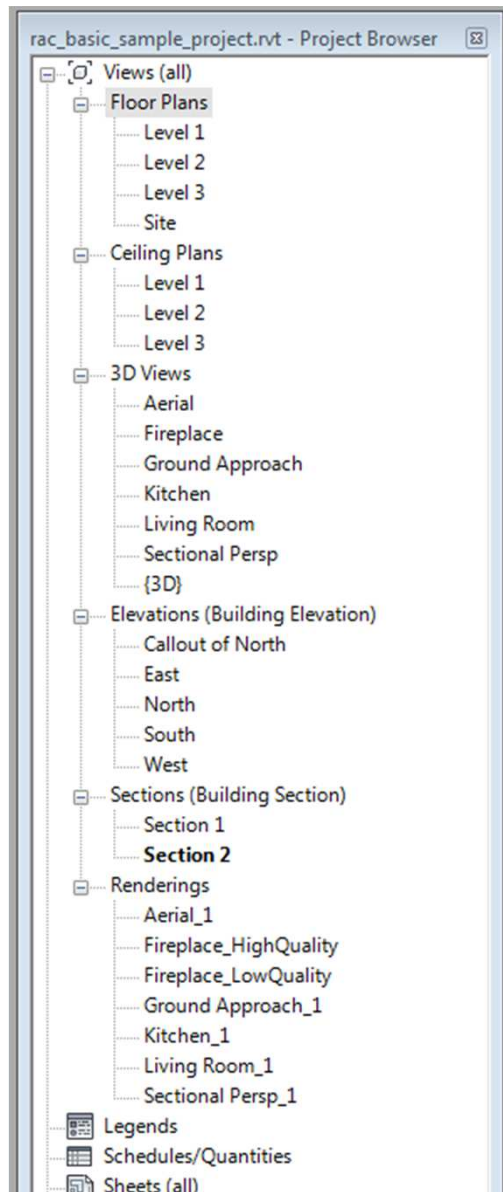
The Options Bar is located directly below the ribbon. Its contents change depending on the current tool or selected element.

Status Bar

The status bar is located along the bottom of the Revit window. When you are using a tool, the left side of the status bar provides tips or hints on what to do. When you are highlighting an element or component, the status bar displays the name of the family and type.

View Control Bar

The status bar is located along the bottom of the Revit window. When you are using a tool, the left side of the status bar provides tips or hints on what to do. When you are highlighting an element or component, the status bar displays the name of the family and type.



Views

A Revit Project typically has several views. The most common examples are the Floor Plans and Elevations. These are 2D views on your project. The next section covers the 3D views.

Views are listed in the Project Browser. Floor Plan views are automatically created for each Level you create (unless you deselect 'Make Plan View').



Mouse controls:

Wheel button

= pan

Control key and wheel button

= zoom -/+

Shift key and wheel button
around point

= pivot



3D Camera views

You can navigate in a 3D view using the Navigation Wheel (Shift-W):

Zoom

Move the camera closer or further away

Orbit

Rotate around the pivot point of the camera

Pan

Move the camera up/down or sideways (in the plane of the view)

Rewind

Go back through your movement history