

SPRING 2024 Elizabethtown College Syllabus

EGR/ART 496 **Architecture Design Studio II**

Architectural design studio course with case studies and lectures.
Professional documentation, drawings, and defense of architectural designs.
Course Credit: 2

ART370 **Architectural Design Theory**

(A separate course in other years, when EGR/ART496 Architecture Design Studio II contained a different lecture series)

Vocabulary of architectural design. Fundamental elements of space and form. Space in relation to light, view, openings, and enclosures. The organization of space, and the elements and relationships of circulation, as well as proportion and scale. Fundamental elements of architecture across cultures. Influences of new materials and standards & practices, with emphasis on sustainability and organic architecture.

Course Credit: 3



TIMES

Fridays 3:30-5:10pm or alternate times when announced;
Additional work & times for Architectural Design Theory students

PROFESSOR

Joseph T. Wunderlich PhD, Associate Professor of Engineering and Computer Science, Architectural Studies Coordinator

[Architecture Portfolio](#) [Architecture Website](#) [CV](#)

Office: E284E, E273 Phone: 717-368-9715 Email: wunderjt@etown.edu

Web site: <http://users.etown.edu/w/wunderjt> YouTube Channel: https://www.youtube.com/channel/UC_kM_k93zrelu40CVwuHQzg

Calendar and Office Hours: <http://users.etown.edu/w/wunderjt/schedules/Wunderlich%20Schedule%20Card%20Spring%202024.pdf>

COURSE OUTLINE

J Wunderlich PhD Copyrighted Lectures

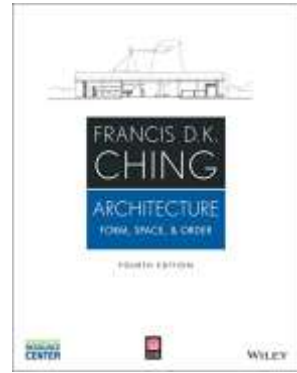
1. **INTRO to ARCHITECTURE THEORY** (2003) [ppt](#) [pdf](#) [mp4](#) [YouTube](#)
2. **VERNACULARS and INSPIRATIONS I**
 - **"ITALIAN ARCHITECTURE & URBAN DESIGN"** [Page](#) [PPTX-w/audio](#) [pdf](#) [MP4](#) [YouTube](#)
3. **PRIMARY-ELEMENTS** [pptx](#) [pdf](#) [mp4](#) [YouTube](#)
Points, Linear Elements, Planes, Volumetric Elements
4. **FORM** [pptx](#) [pdf](#) [mp4](#) [YouTube](#)
Properties of Form, Primary Shapes, Regular and Irregular Forms, Subtractive and Additive Forms, Centralized, Linear, Radial, Cluster, and Radial Forms, Collisions of Geometries, Articulation of Form, Surface Articulation
5. **VERNACULARS and INSPIRATIONS II**
 - **"FLW, AGE 20 TO 33 (1887-1900)"** [PPTX-w/audio](#) [MP4](#) [YouTube](#) [PDF](#) - Simple Geometries, Begins organic architecture, Chicago
6. **FORM & SPACE I** [pptx-w/audio](#) [pdf](#) [mp4](#) [YouTube](#)
7. **FORM & SPACE II** [pptx-w/audio](#) [pdf](#) [mp4](#) [YouTube](#)
Unity of Opposites, Vertical and Horizontal Forms Defining Space, Base, Elevated, Depressed, and Overhead Planes, Configuration and Shape of Planes, Openings, Degree of Enclosure
8. **VERNACULARS and INSPIRATIONS III**
 - **"JAPANESE PEOPLE, URBAN DESIGN, & ARCHITECTURE"** [pptx-w/audio](#) [pdf](#) [MP4](#) [YouTube](#) [Japanese Vocabulary](#) (Dr. Mahua Bhattacharya Key Words)
 - **"VLOG OF 31 FLW CHICAGO DESIGNS"** - time 0:00 to 18:51 **"FLW, AGE 34 TO 41 (1901-08)"** [PPTX-w/audio](#) [MP4](#) [YouTube](#) [PDF](#) - Arts & Crafts, Prairie Style, Japan
9. **ORGANIZATION** [pptx](#) [pdf](#) [mp4](#) [YouTube](#)
Organization of Form and Space, Spatial Relations, Space within the Space, Interlocking Spaces, Adjacent Spaces, Spaces Linked by a Common Space, Spatial Organization
10. **CIRCULATION** [pptx](#) [pdf](#) [mp4](#) [YouTube](#)
Movement through Space, Circulation Elements, Approach, Entrance, Configuration of Path, Path-Space Relationships, Form of Circulation Space
11. **VERNACULARS and INSPIRATIONS IV**
 - **"MANSIONS"** [pptx-w/audio](#) [pdf](#) [MP4](#) [YouTube](#)
12. **PROPORTION & SCALE** [pptx](#) [pdf](#) [mp4](#) [YouTube](#)
Material, Structural, and Manufactured Proportions, Golden Section, Renaissance, Modularity, Anthropometry, Visual Scale, Human Scale, Principles Axis, Symmetry, Hierarchy, Rhythm, Repetition, Transformation
13. **PRINCIPLES** [pptx](#) [pdf](#)
 - **Dr. W. upcoming book on ORGANIC ARCHITECTURE of Frank Lloyd Wright** [pptx-w/audio](#) [pdf](#) [mp4](#) [YouTube](#)
14. **PORTFOLIOS**
 - Etown Case Studies [mp4](#) [YouTube](#) [Architecture Studio Website](#) Previous student works [Website](#)
 - J Wunderlich Ph.D. A&E Portfolio [pptx-w/audio](#) [pdf](#) [mp4](#) [YouTube](#) [YouTube Channel](#)

MATERIALS & TOOLS

I will supply you with some materials and lend you some tools, however you may need to buy some materials and a few small tools.

BOOKS

- [1] **(required)** American Institute of Architects, Dennis J. Hall (Editor-in-Chief), *Architectural Graphic Standards*, 12th Edition, March 2016. ISBN:978-1-118-90950-8
- [2] I will summarize everything out of this book; however I recommended that you purchase it on your own. Ching, Francis D.K. *Architecture: Form, Space, and Order*. Wiley; 4 edition (September 29, 2014) ISBN-10: 9781118745083



LEARNING OBJECTIVES / OUTCOMES

- Architectural Analysis, Case Studies, and Design
- Develop architectural forms from abstract ideas
- Understand form & space, proportion & scale
- Create architectural models
- Write architectural specifications
- Develop skills in architectural critique

GRADES

50% ASSIGNMENTS AND QUIZES -- Each student must work independently

40% SEMESTER PROJECT -- Each student must work independently or with one partner if given permission

10% PORTFOLIO ON-LINE

(60-62)=D-, (63-67)=D, (68-69)=D+, (70-72)=C-, (73-77)=C, (78-79)=C+, (80-82)=B-, (83-87)=B, (88-89)=B+, (90-92)=A-, (93-100)=A
(with any fractional part rounded to the nearest integer)

SCHOOL CLOSURE / CLASS CANCELCATION

Additional work assigned to cover any class cancelation.

ACADEMIC HONESTY

Elizabethtown College Pledge of Integrity: *"Elizabethtown College is a community engaged in a living and learning experience, the foundation of which is mutual trust and respect. Therefore, we will strive to behave toward one another with respect for the rights of others, and we promise to represent as our work only that which is indeed our own, refraining from all forms of lying, plagiarizing, and cheating."* See the 2016-17 Elizabethtown College Catalog,

"Standards of Academic Integrity http://catalog.etown.edu/content.php?catoid=10&navoid=507#Academic_Judicial_System or Academic Integrity at Elizabethtown College, 11th ed. <https://www.etown.edu/offices/dean-of-students/files/academic-integrity-handbook.pdf>

ARTIFICIAL INTELLIGENCE USE

"In this course, students shall give credit to AI tools whenever used, even if only to generate ideas rather than usable text or illustrations. When using AI tools on assignments, add an appendix showing (a) the entire exchange, highlighting the most relevant sections; (b) a description of precisely which AI tools were used (e.g. ChatGPT private subscription version or DALL-E free version), (c) an explanation of how the AI tools were used (e.g. to generate ideas, turns of phrase, elements of text, long stretches of text, lines of argument, pieces of evidence, maps of the conceptual territory, illustrations of key concepts, etc.); (d) an account of why AI tools were used (e.g. to save time, to surmount writer's block, to stimulate thinking, to handle mounting stress, to clarify prose, to translate text, to experiment for fun, etc.). Students shall not use AI tools during in-class examinations, or assignments unless explicitly permitted and instructed. Overall, AI tools should be used wisely and reflectively with an aim to deepen understanding of subject matter." Source: <https://ctl.utexas.edu/chatgpt-and-generative-ai-tools-sample-syllabus-policy-statements>

DISABILITY SERVICES, RELIGIOUS OBSERVANCES, and COVID

https://elizabethtown-my.sharepoint.com/:w:/g/personal/ouimetc_etown_edu/EfZ-QooKt_VPi9wsWJz230wB3Rb6CIHsPvE0xuqWCpr-UA?e=4%3acZzipW&at=9

DISABILITY SERVICES: Elizabethtown College welcomes otherwise qualified students with disabilities and is committed to providing access for all students to courses, programs, services, and activities. If you have a documented disability such as a learning disability or chronic illness or a new circumstance such as a concussion and would like to request accommodations, please contact the Director of Disability Services by phone (717-361-1227) or e-mail (daviesl@etown.edu). The Office of Disability Services can provide resources to you and facilitate communication with faculty about reasonable accommodations. After meeting with the Office of Disability Services, please set up an appointment to meet with me, the instructor, to discuss the accommodations as they pertain to my class.

RELIGIOUS OBSERVANCES: The College is eager to facilitate individual religious beliefs and practices whenever possible while retaining course student learning outcomes. It is your responsibility to meet with the class instructor in advance to request arrangements related to your religious observances that may conflict with this class, and to make appropriate plans to make up any missed work.

COVID-RELATED EXPECTATIONS: All students are expected to adhere to the established community expectations around safety, including: daily digital health reporting, physical distancing, proper wearing of facial coverings within buildings and classrooms and when within six feet of individuals outdoors, frequent handwashing, and participation in cleaning and sanitizing protocols as requested. You will be turned away from class if you do not have a face covering. Students diagnosed with a health condition that precludes mask wearing can contact Lynne Davies in Disability Services (daviesl@etown.edu) to request remote learning as a reasonable accommodation. **If you are exhibiting any symptoms of COVID or fail to pass the daily health screen, do not come to class.** Failure to adhere to the established community expectations around safety will result in notification of Campus Security and application of the student conduct process for failure to comply, endangering the well-being of others, and/or disorderly conduct. The student code of conduct applies also to participation in all virtual activities, including Zoom sessions and discussion boards.

MENTAL HEALTH & COUNSELING RESOURCES

Counseling Services provides a broad range of counseling and mental health support services that facilitate our students' personal, social, and academic development. Our licensed mental health professionals provide short-term individual counseling, group counseling, crisis intervention, and consultation to currently enrolled students for no additional charge. Counseling services are provided in a confidential and diversity-affirming environment to help students address a variety of mental health, situational, and developmental concerns. Our office is located in the Baugher Student Center, Suite 216. Appointments can be made in person or by calling 717-361-1405. Urgent walk-in services are also available. To access our after-hours crisis services, please call the 24/7 Campus Security number of 717-361-1111. For more information, please visit www.etown.edu/offices/counseling located in the Baugher Student Center, Suite 216. Appointments can be made in person or by calling 717-361-1405. Urgent walk-in services are also available. To access our after-hours crisis services, please call the 24/7 Campus Security number of 717-361-1111. For more information, please visit www.etown.edu/offices/counseling

SEMESTER PROJECT - CEDAR HILL HOUSING

Design on the Elizabethtown College Cedar Hill site, housing for approximately **100 students** in apartment/townhouse style units designed for 4 students, each containing a kitchen, laundry, two bathrooms, and a living room. Units should be grouped into a cluster of buildings, with preferably staggered connectivity between units. The 2011 concept drawing by Derck & Edson below, with six separate buildings, is not fixed – in either the number of buildings, or their orientations.

2011 update to 1999 Master Plan by Derck & Edson:



*Six Derck & Edson proposed buildings are not fixed
(i.e., Student designs likely completely different)*

Student housing for Cedar Hill

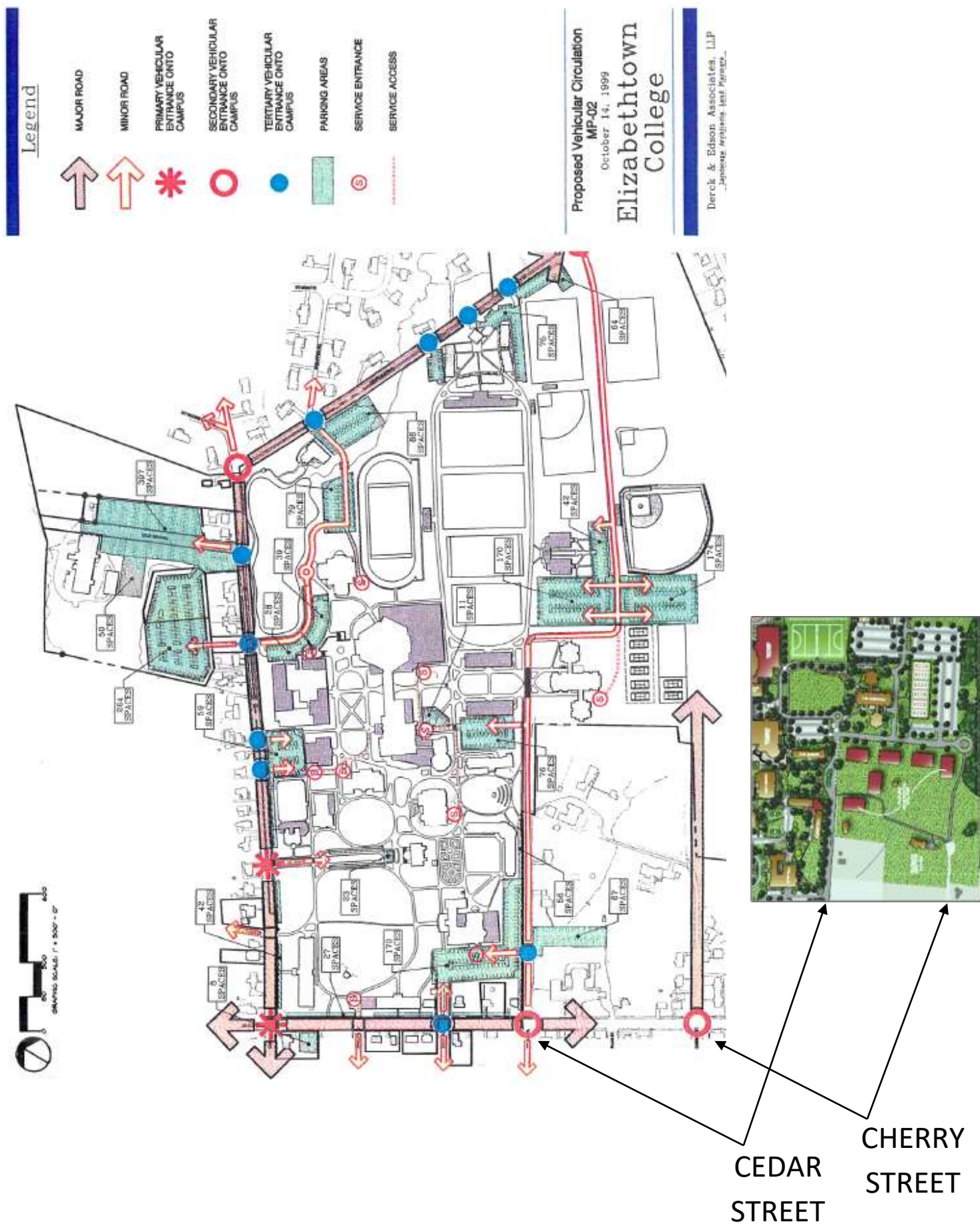
Also design a new quadrangle that extends to the library

It's optional whether or not you wish to end Cedar Street before your new Quadrangle that you will design from the library to your housing cluster, and to create a new main entrance to the College on Cherry Street leading to the center of campus as shown below. But never-the-less **design a new Quadrangle from your new housing, down to the library.**

You are allowed to move as much dirt as you wish (i.e., in the cut & fill "grading" of your site), including possibly making a continuous, or stepped, change in elevation from the elevation line at 520' located at the Cherry Street extension side of your site, down to the 500' elevation at the library. Provide one parking space on site for every 4 students.

This development should be consistent with the [Elizabethtown Borough Regional Plan](#) and the [Elizabethtown College Master Plan](#) including [the 1999 Master Plan \(Chapter1\)](#), [the seven 1999 Site Analysis Maps](#), [the 2011 Plan Update](#), and [the 1999 Proposal to move the main entry from Cedar Street to Cherry Street](#).

PROPOSED MOVING OF MAIN ENTRY on CEDAR STREET to CHERRY STREET
1999 Elizabethtown College Master Plan





NORTH

CEDAR HILL HOUSING

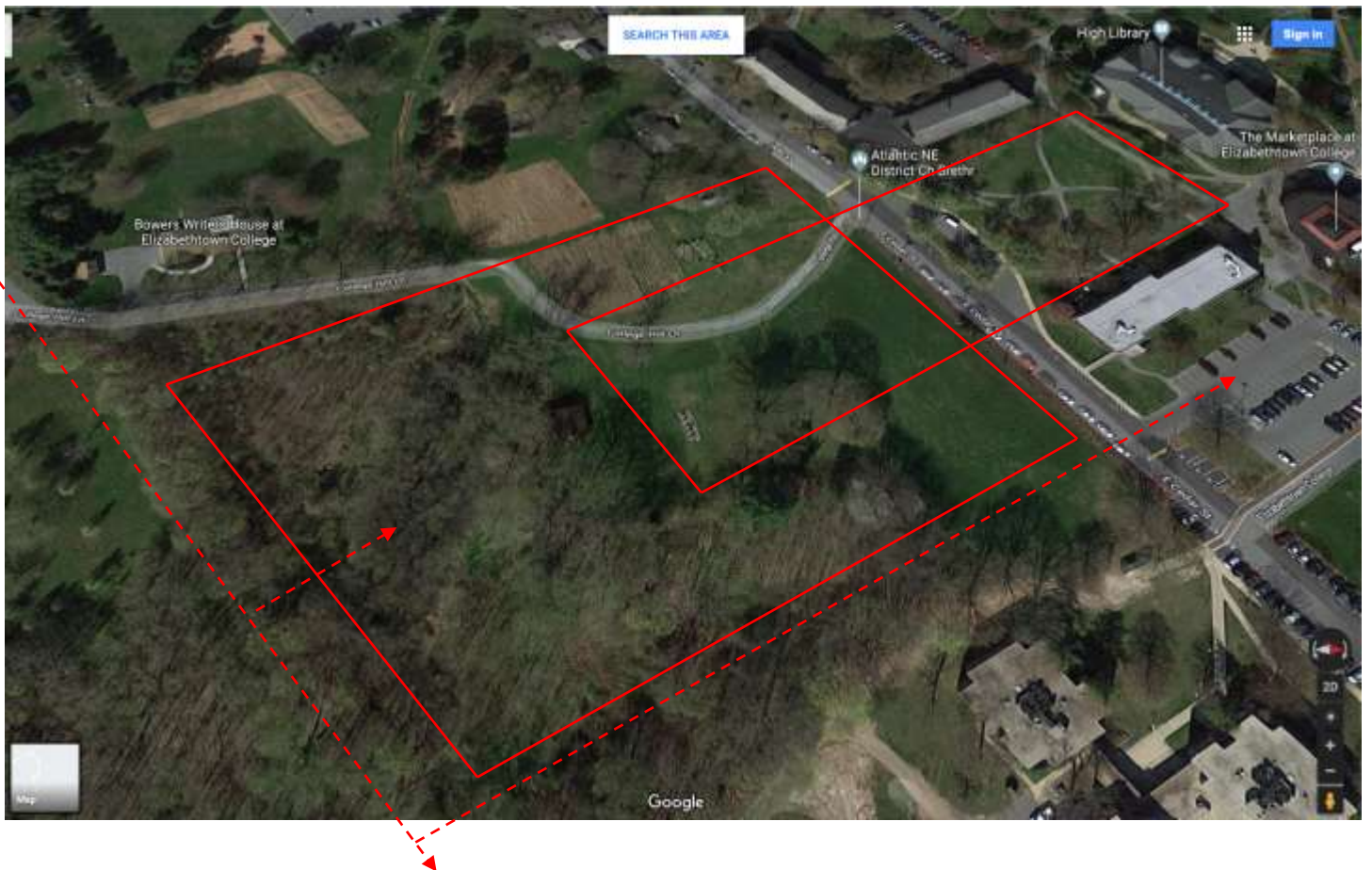
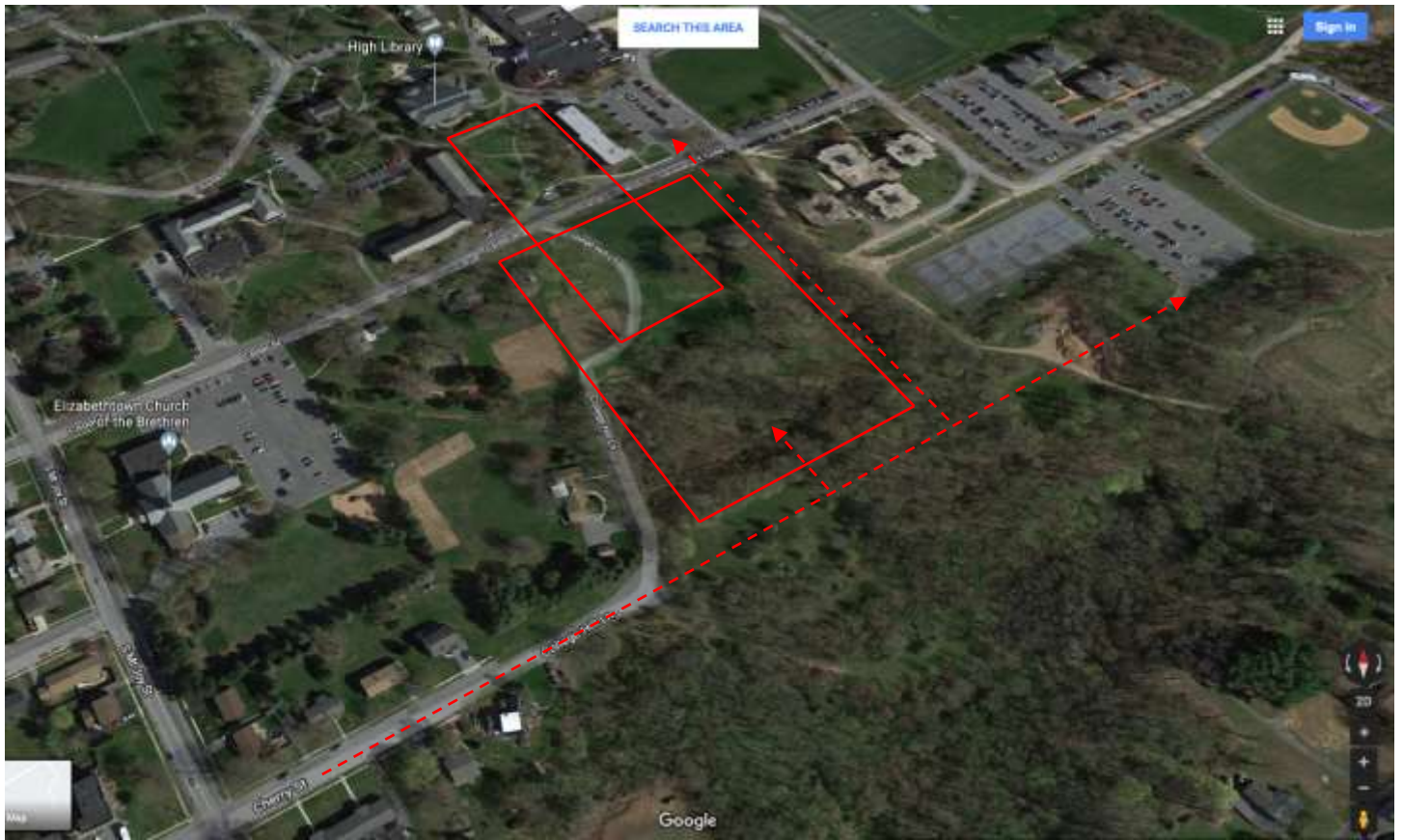


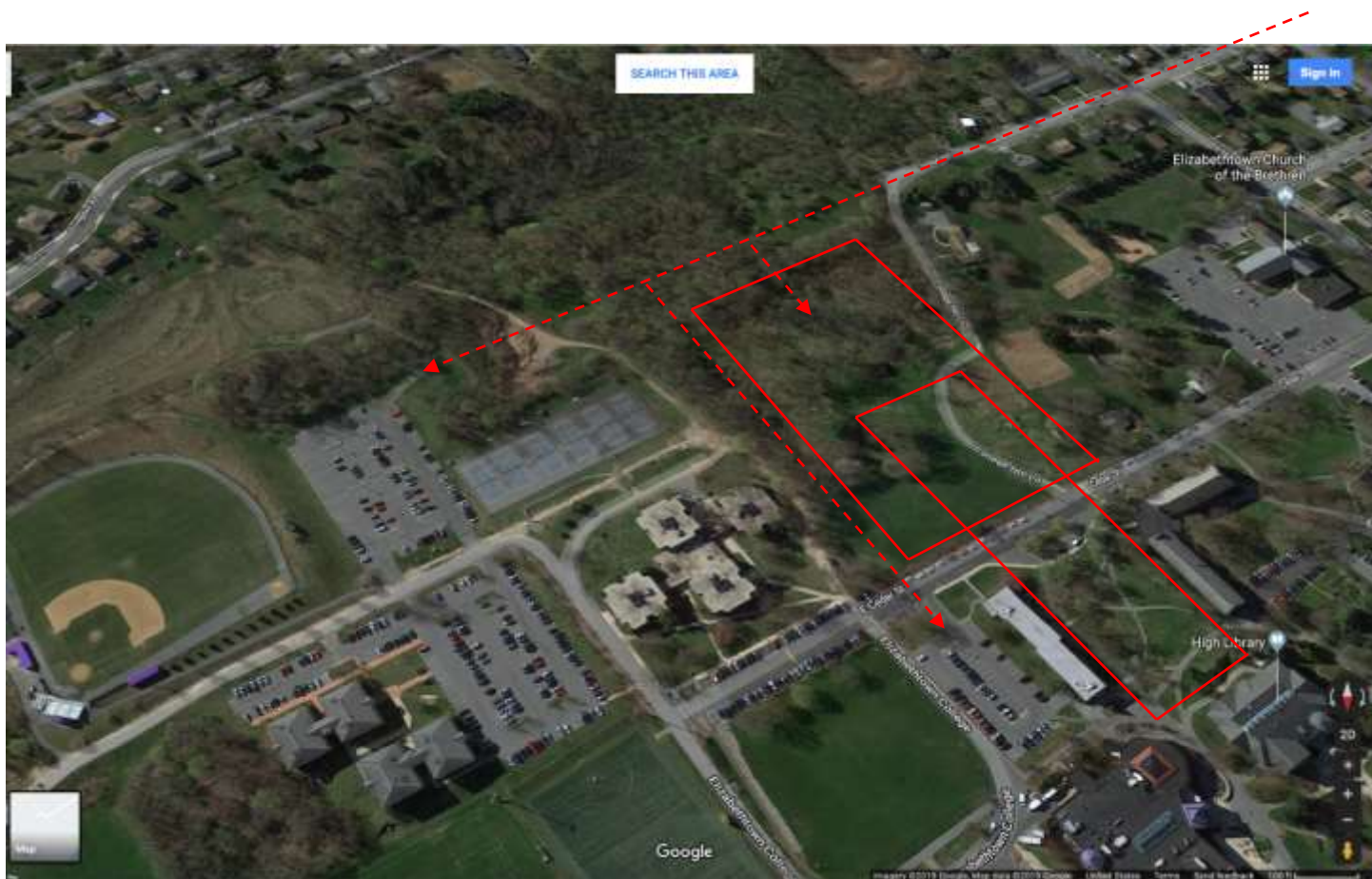


NORTH

CEDAR HILL HOUSING







View driving East up Cedar Street with site on the right:



EVERYTHING BELOW IS FOR USING REVIT FOR SEMESTER PROJECTS

In E273 Studio, use College REVIT licenses.

At home, use free 3-year student license: <http://www.autodesk.com/education/free-software/revit>

PART 1 TOPOGRAPHICAL SITE PLAN

(Adapted for 2017 REVIT from 2015 video: https://www.youtube.com/watch?v=4b_lkpQrC0)

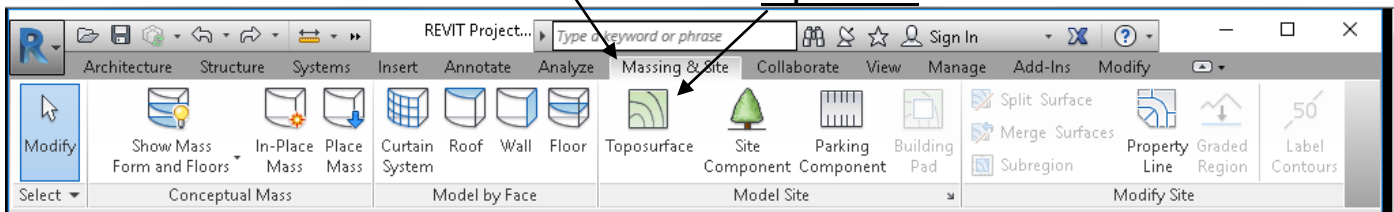
- Click **New** project
- **Create a rough facsimile of your semester project building(s)**



Select "**Site**" under "Floor Plans" in Project Browser window

Click on **“Massing & Site”**

Click on **“Toposurface”**



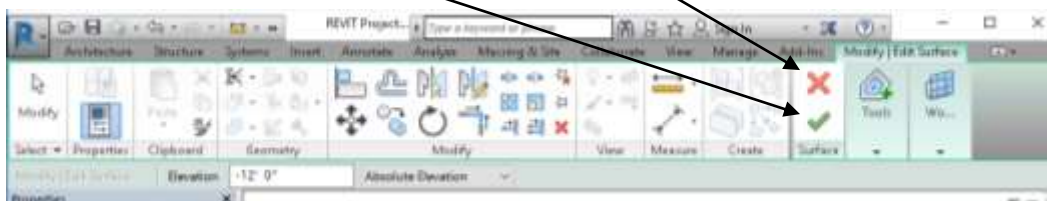
Using this jpg file create specifically for your semester project site:

<https://users.etown.edu/w/wunderjt/Architecture%20Lectures/TOPOGRAPHICAL%20MAP%20for%20Cedar%20Street%20Housing.jpg>

Insert your jpg file into a site plan (as an **Image**), then create a site plan like you did in the class exercise, guess the elevations at the corners based on the elevation lines spaced at 20 feet apart, and by using the large campus site plan above to know if adjacent lines are higher or lower than each other.



Click the green check icon when done (or the Red X to exit the editing mode)



Add your semester project buildings

PART 2 GRADE THE SITE to have the same level of the “grade” (dirt) around the building(s)

Select **Site** under Floor Plans in Project Browser window

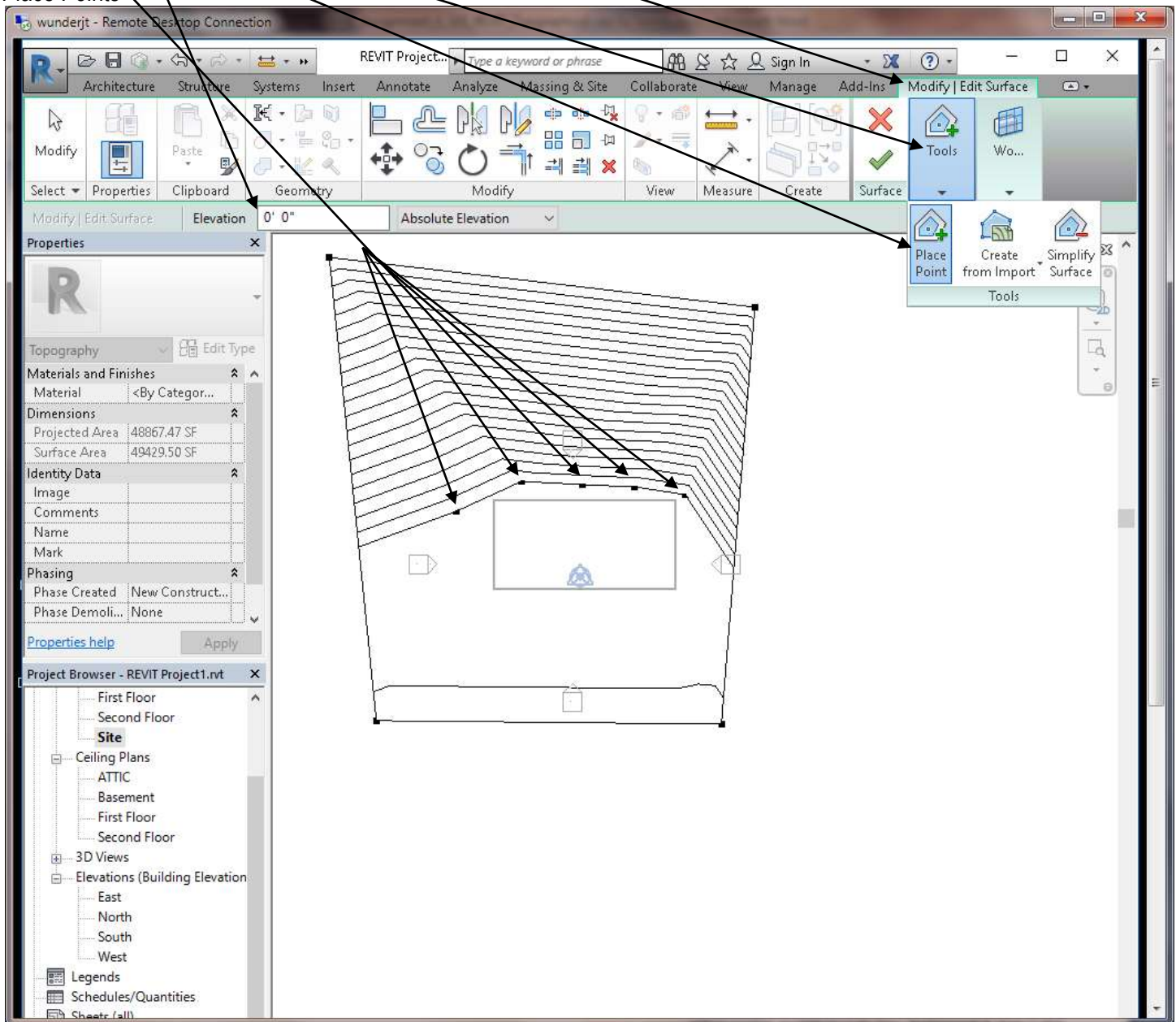
Click **Modify | Edit Surface**

Click **Tools**

Click Place Point

Enter 0'-0" here

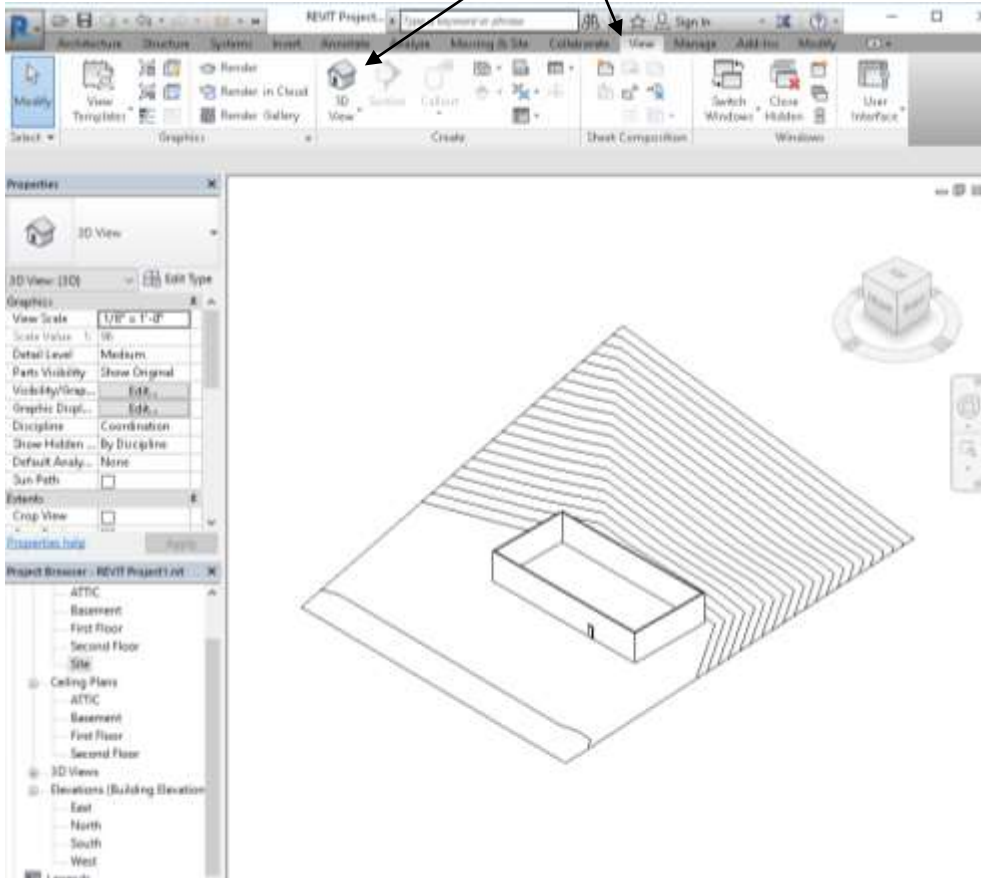
Place Points



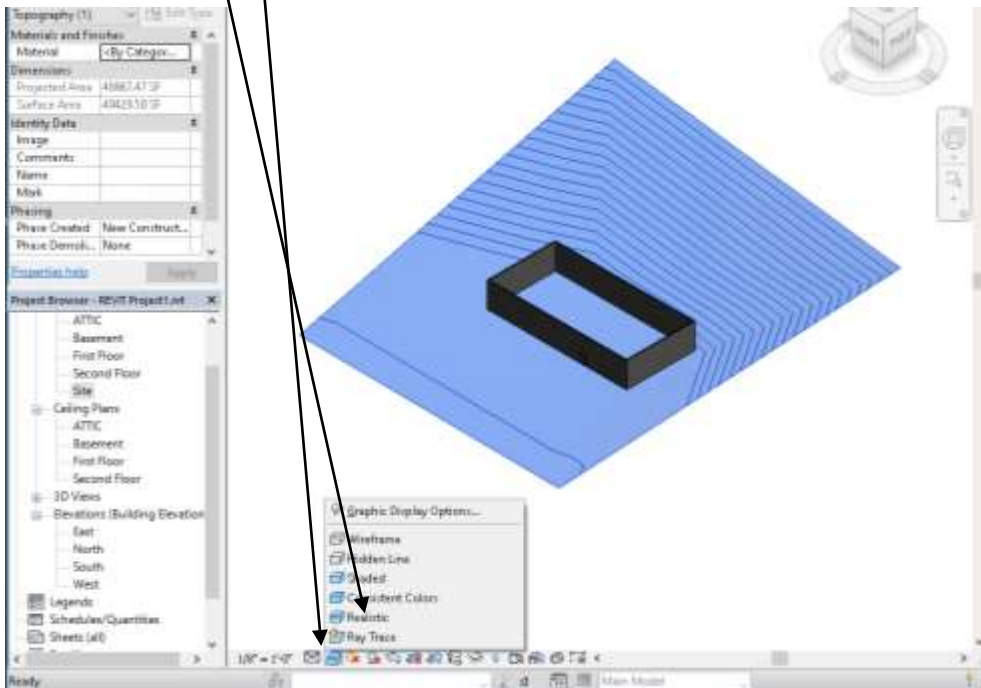
Click the green check icon when done (or the Red X to exit the editing mode)



Click **View**
and **3D**



Click on View Control
Click on Realistic



- Type “**W**” “**T**” for **Window Tiles** (a mosaic of your windows)
- Open, close, and play with windows until you have these windows in your mosaic with each nicely centered in a tile:
 “**3D View**” “**Elevation - East**”
- Open a Word file
- **ALT+PrintScreen**, then **CTRL-V** to paste it into a word file
- **Save Revit file** where you can retrieve it; Call it “**Semester Project Topography your full name**”

It should look something like this (but with your unique site and design):

Play with this to get images centered

