Mansions

and their influence on more modest architecture

All photographs by J. Wunderlich unless noted otherwise

B.S. Architectural Engineering (U. Texas at Austin)

Plus 2 years of Urban Design (U. California, San Diego)

Agenda

- Mansion & castle examples
  - *Reference:*
    - *"Buildings Across Time"* 4th edition
- Local mansion examples
  - Mansion-inspired designs
- One personal design
  - Mansion-inspired

CHINA

Image from: http://www.cen-se.com.cn/woodenhouse/beijing_1_4.jpg

CHINA

- From 6th century
- Interior Freedom in plan
- Timber Post & Beam with complex decorative joinery
- Buildings around courtyard
- Axial arrangement, formal cues, sequencing to establish dominance
- Building placement according to **Confucian** ideals of hierarchy and **Taoist** traditions with respect to natural forces
  - **FENG SHUI** is an extension of Taoist principles
- Understanding of sun-angles, wind, and microclimates

JAPAN

Katsura Imperial Villa Kyoto Japan, circa 1616-60

Image from: https://s3.amazonaws.com/test.classconnection/971/flashcards/394971/jpg/katsura-imperial-villa.jpg

JAPAN (from 1600's)

- Towns:
  - Row houses with shops along street
  - Wooden posts on stone foundations; planked-covered gabled roofs. Walls of light-weight screening. Street-level windows above eye level for privacy
  - Small gardens behind house
- In countryside:
  - "Minka" (wooden folk house)
  - May shelter animals as well as people
  - Dirt floors or raised wood platforms
  - Roofs thatched, bamboo, or wood shingles
  - "Tatami" (straw floor mats) determine room dimensions
- Simplicity, artistry, and attention to detail
  - Inspired Frank Lloyd Wright
- Architecture reflects Japanese qualities of composure and repose *(a state of rest, sleep, or tranquility)*

Japan = Tradition + Hi Tech + Group Harmony (“Wa”)

ITALY

Roman atrium house

Image from: http://jenniferlharris.weebly.com/uploads/2/8/9/4/28948621/2417384_orig.jpg

ITALY

Roman atrium house

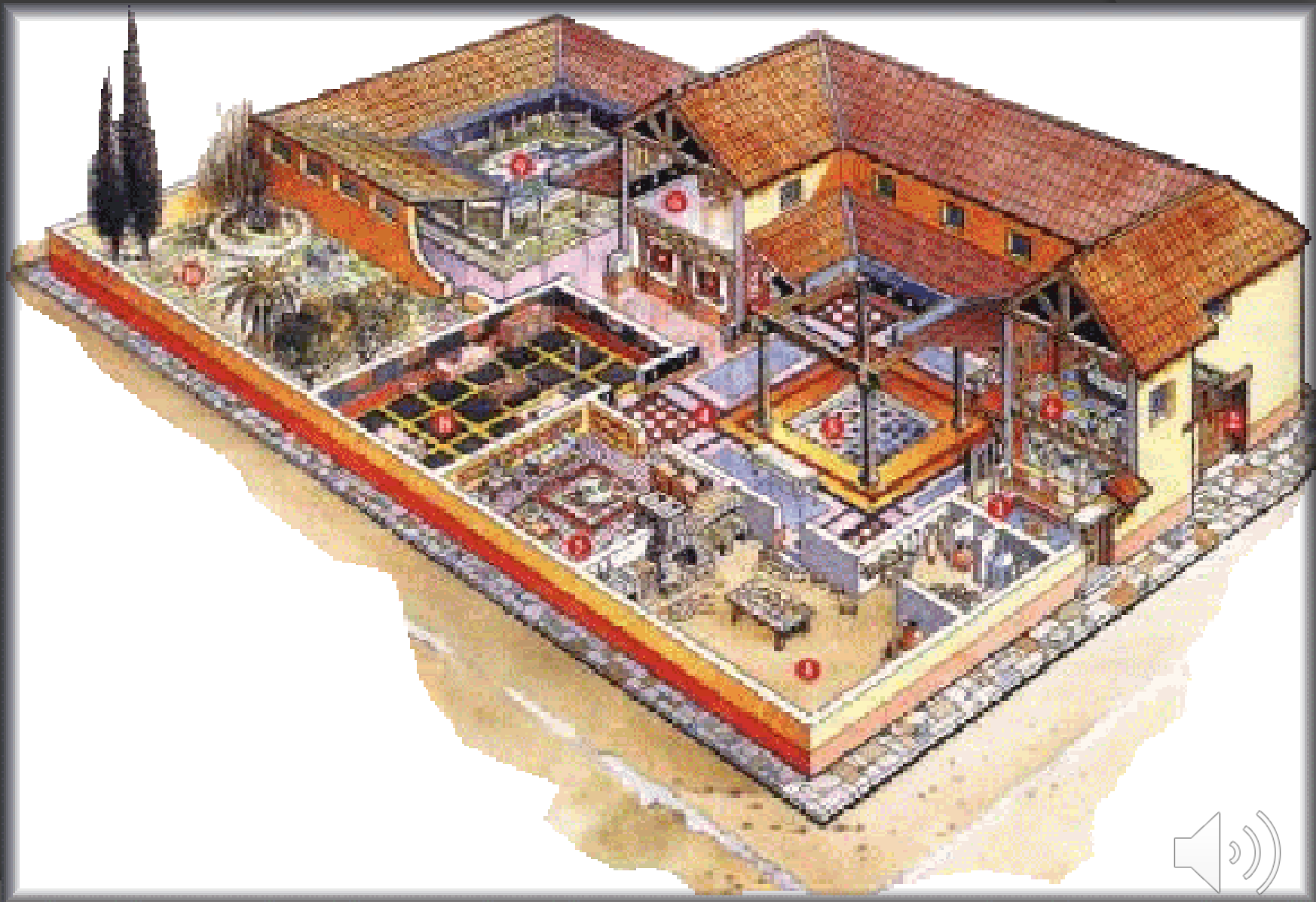


Image from: http://img.photobucket.com/albums/v487/rjfernalld/Domus.gif

ITALY
Palladian Villa Rotunda, Vicenza

Image from: http://static.guim.co.uk/sys-images/Guardian/Pix/pictures/2009/1/4/1231110397682/Villa-Capra-La-Rotunda-by-001.jpg

ITALY

Palladian Villa Rotunda, Vicenza

Image from: http://www.airpano.ru/files/neuschwanstein_11_big.jpg

ITALY

Palladian Villa Rotunda, Vicenza

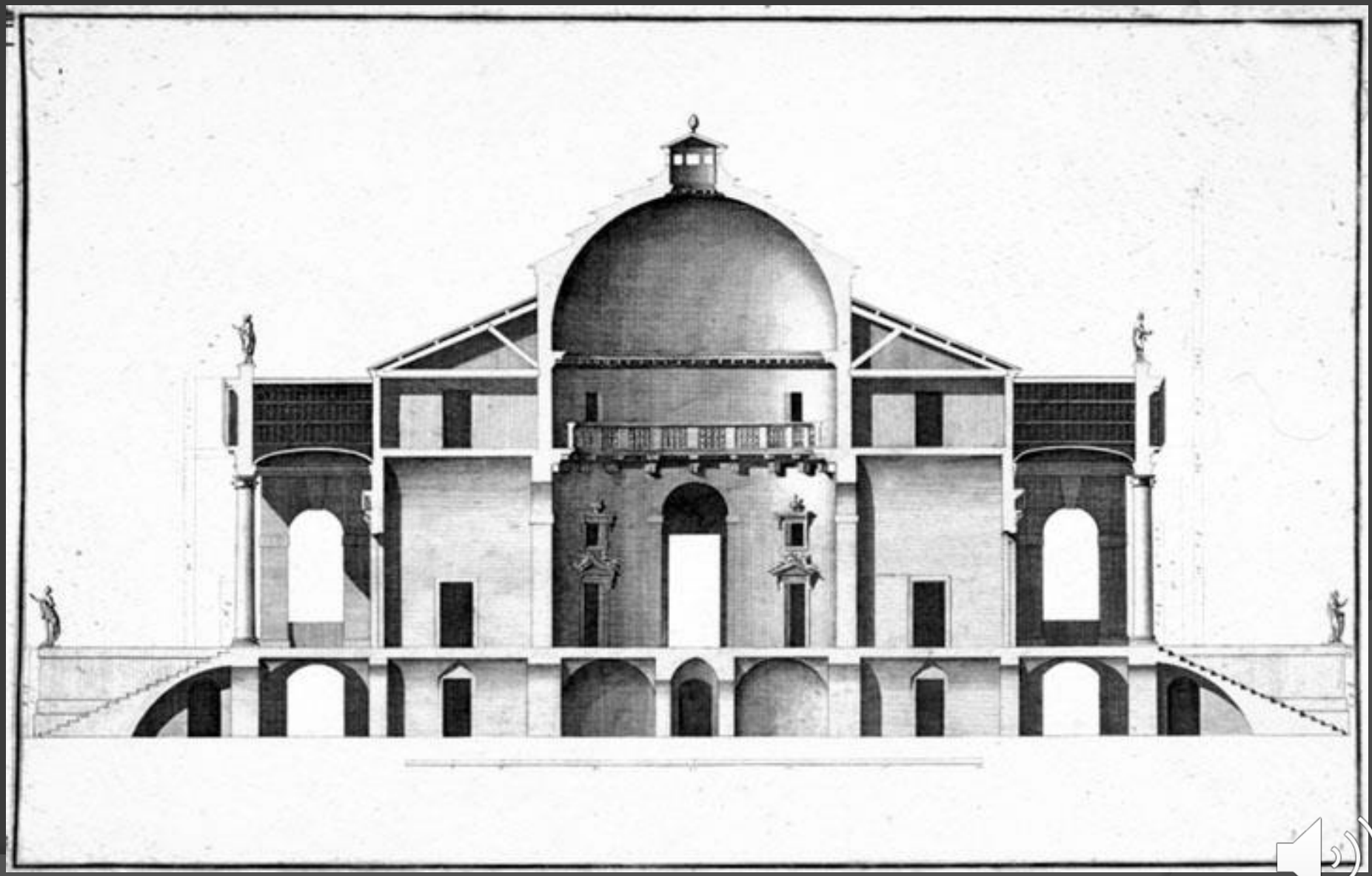
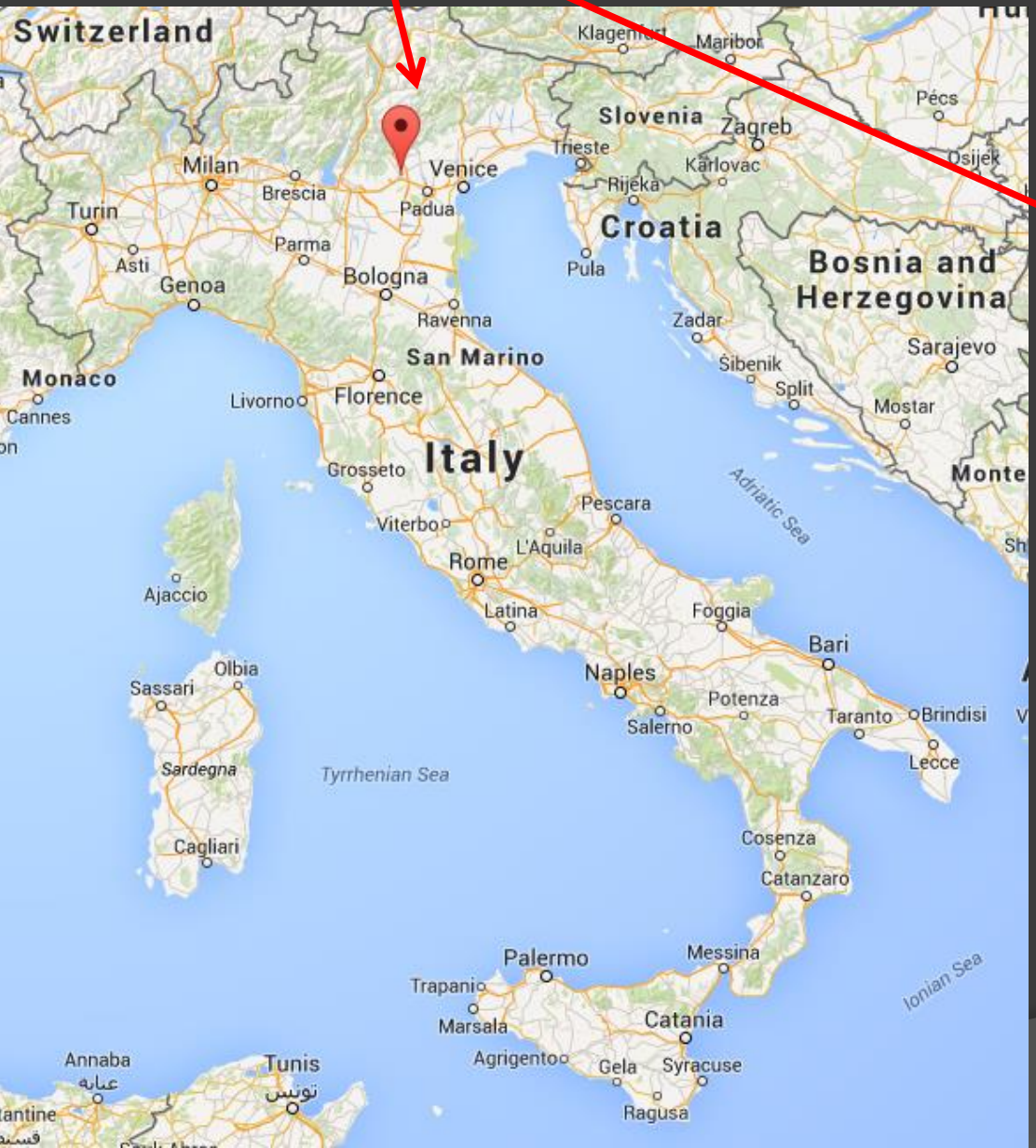


Image from http://www.oberlin.edu/images/Art260/260-048.JPG

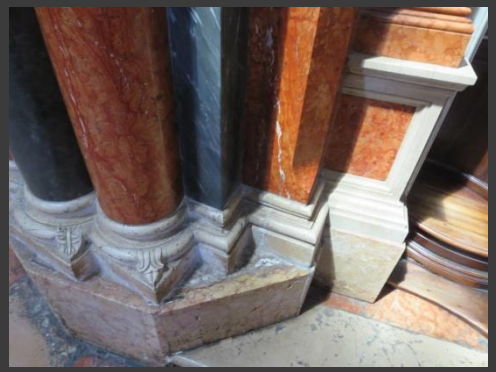
Vicenza Italy is near Padua (“Padova)” and Venice (“Venezia”)
All part of the Venetian Empire (600’s to 1700’s AD)

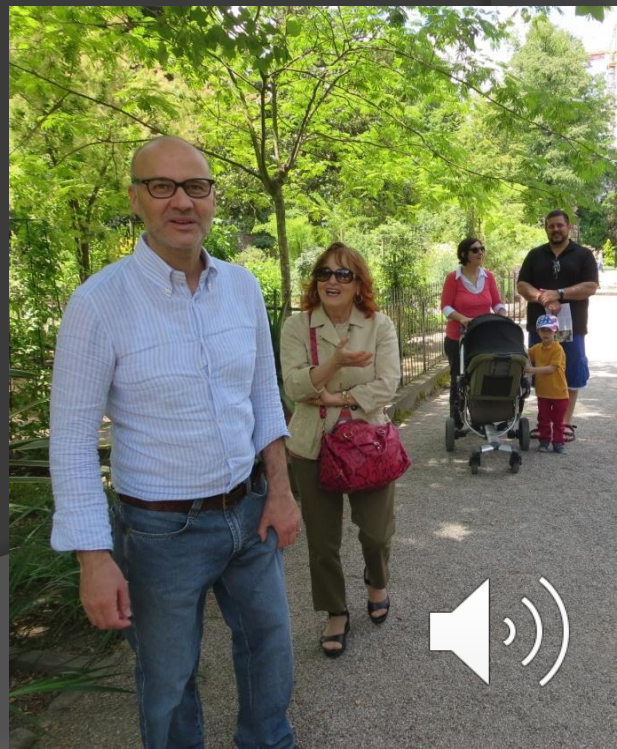


ITALY
Venice

ITALY

Padua (“Padova)”





Basilica of Saint Anthony 1310 AD

GERMANY

Hohenzollern Castle, Stuttgart

Image from: http://www.it-pros.ie/wp-content/uploads/2014/09/Hohenzollern-Castle-Germany-2.jpg

GERMANY

Neuschwanstein Castle, Bavaria

Image from: http://www.airpano.ru/files/neuschwanstein_11_big.jpg

ENGLAND

Windsor Castle

Image from: http://upload.wikimedia.org/wikipedia/commons/8/8f/Windsor_Castle_at_Sunset_-_Nov_2006.jpg

ENGLAND

Windsor Castle

USA

Monticello, Charlottesville Virginia, 1770 AD

Thomas Jefferson's Home

Image from http://uvamagazine.org/images/uploads/2009/fall/0903_letters_monticello.jpg

USA

Monticello, Thomas Jefferson's Home

Image from http://www.monticello.org/sites/default/files/uploaded-content-images/monticello_west_earlyspring.jpg

USA

Monticello, Thomas Jefferson's Home

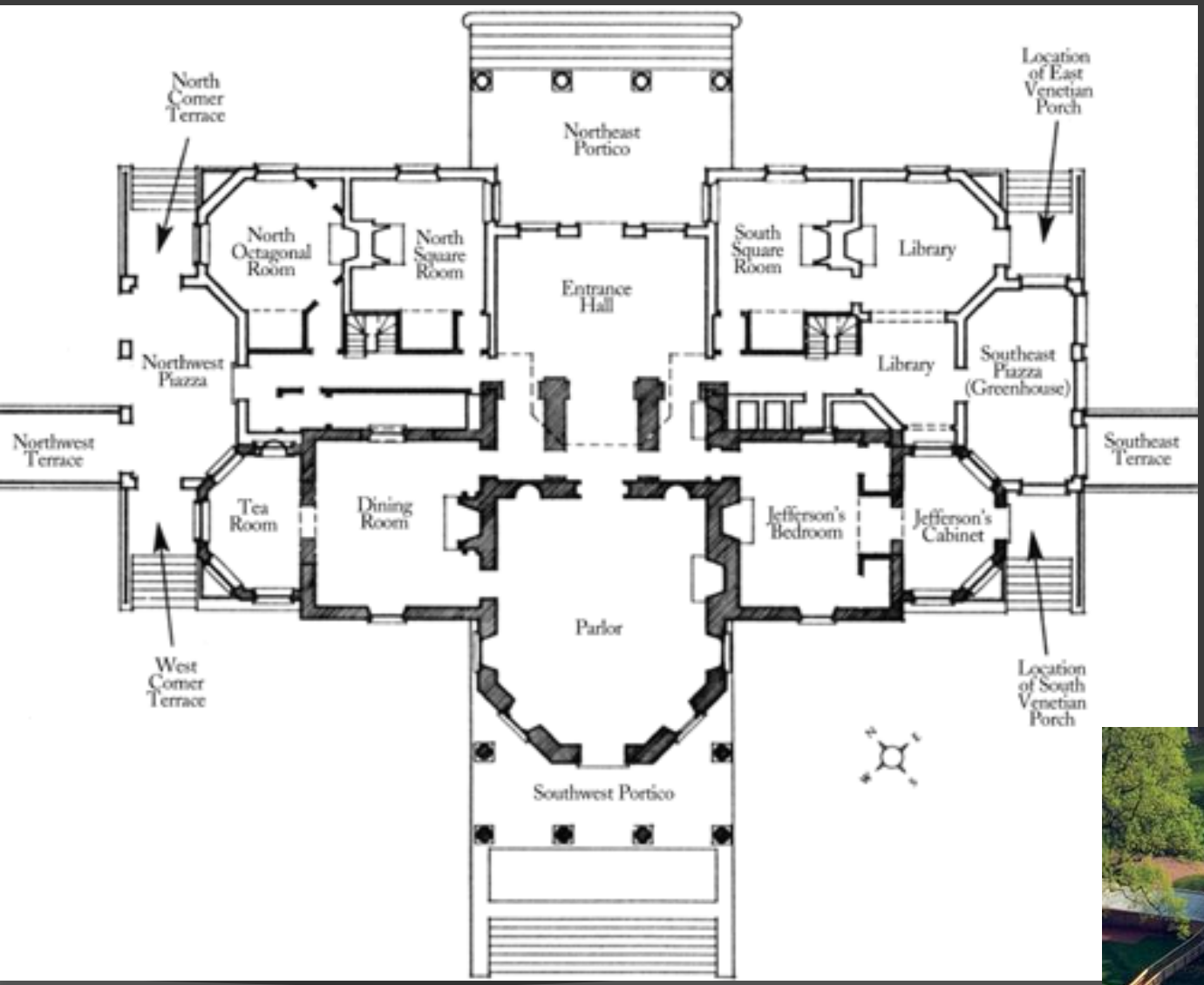


Image from http://www.monticello.org/sites/default/files/uploaded-content-images/first_floor.gif

USA

Monticello, Thomas Jefferson's Home

- Inspired by the Pantheon in Rome circa 125 CE (AD)

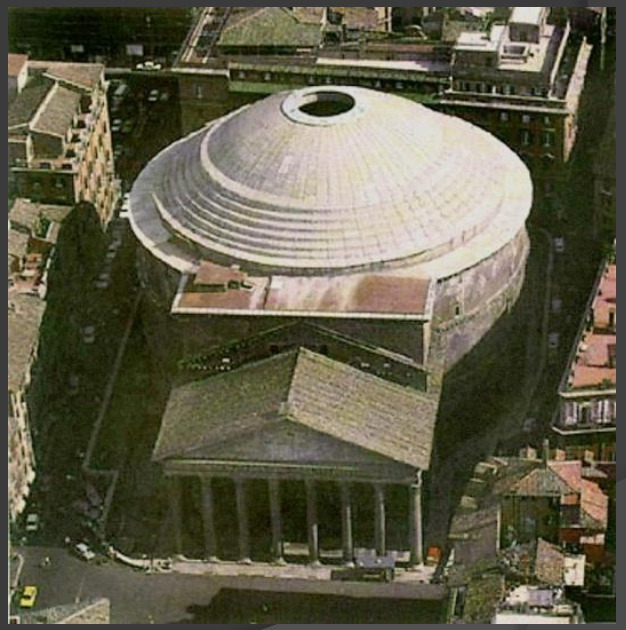


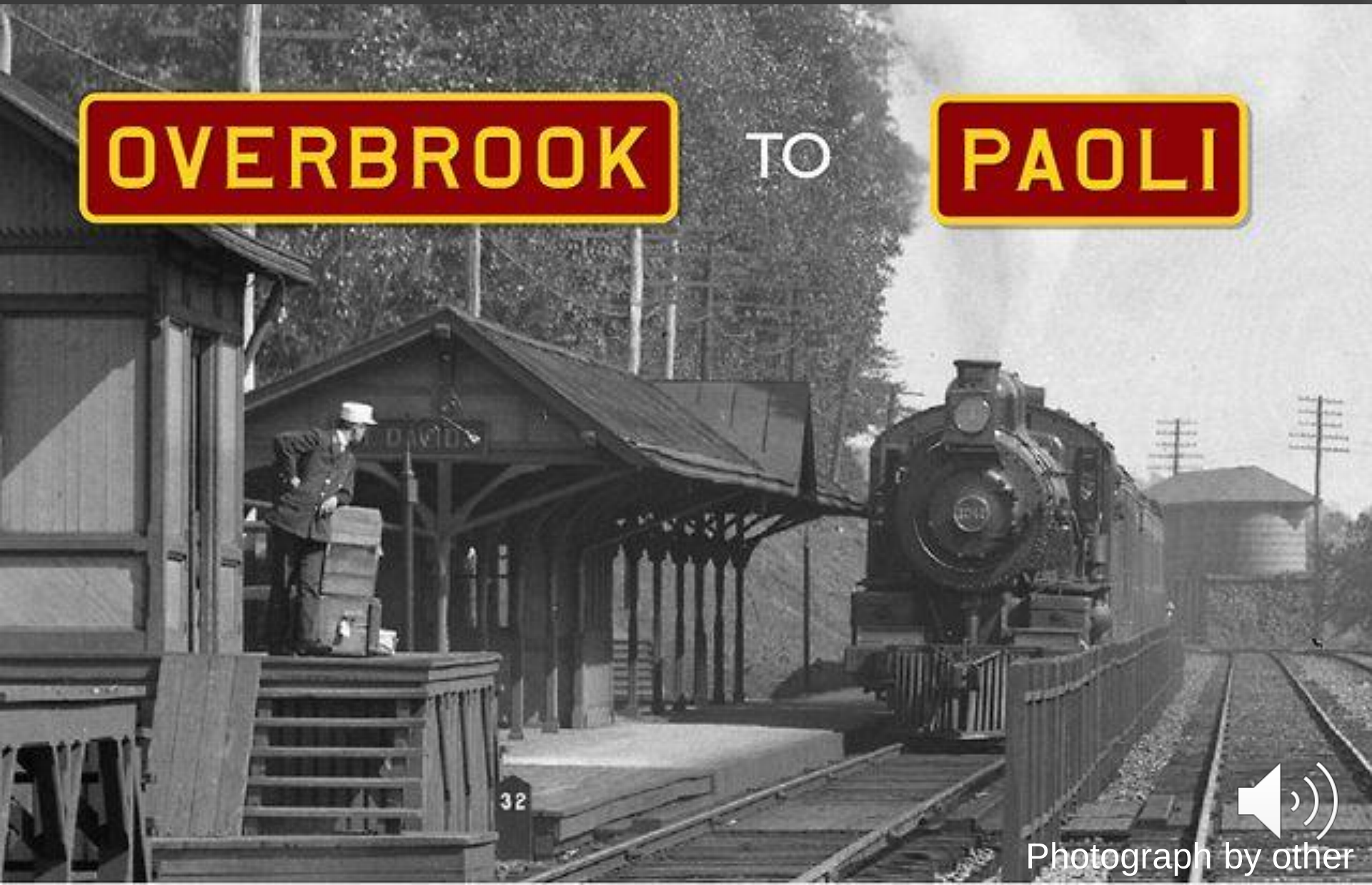
Image from http://www.monticello.org/sites/default/files/uploaded-content-images/first_floor.gif

Image from http://www.charmingrome.net/wp-content/uploads/2010/05/pantheon_01.jpg

Local (regional) Mansion Examples

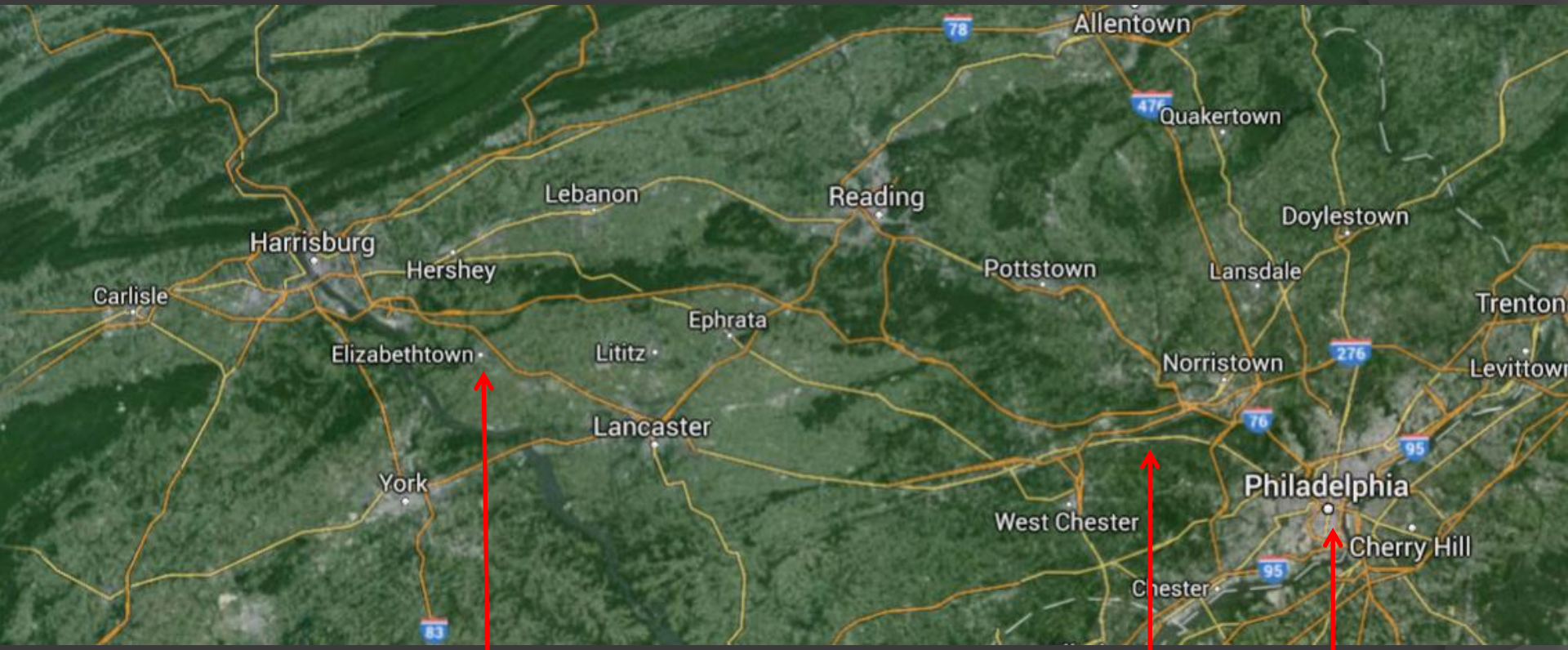
- Philadelphia “Main Line”
  - Country estates west of city
  - Accessed by Main Line of railroad tracks

Philadelphia Main Line



Photograph by other

Philadelphia Main Line rails continue to Elizabethtown

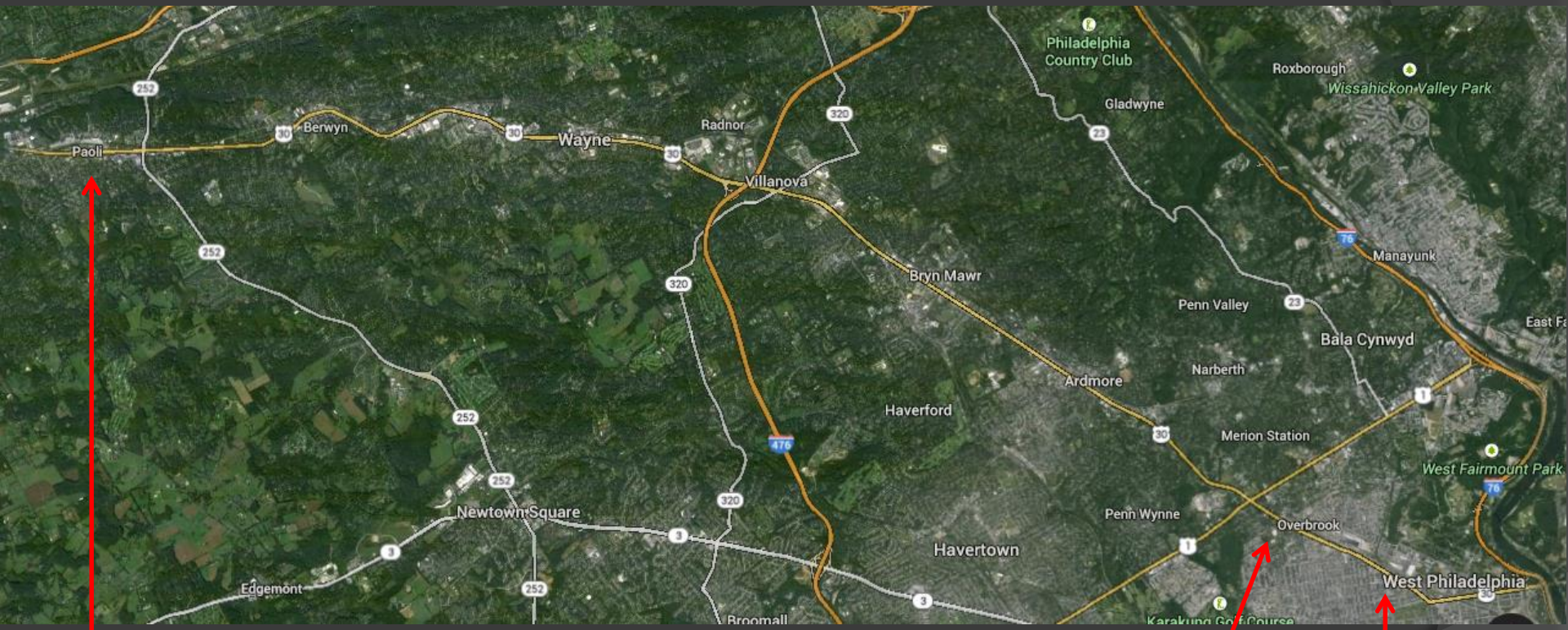


Elizabethtown

Paoli

Philadelphia

Philadelphia “Main Line”



Paoli

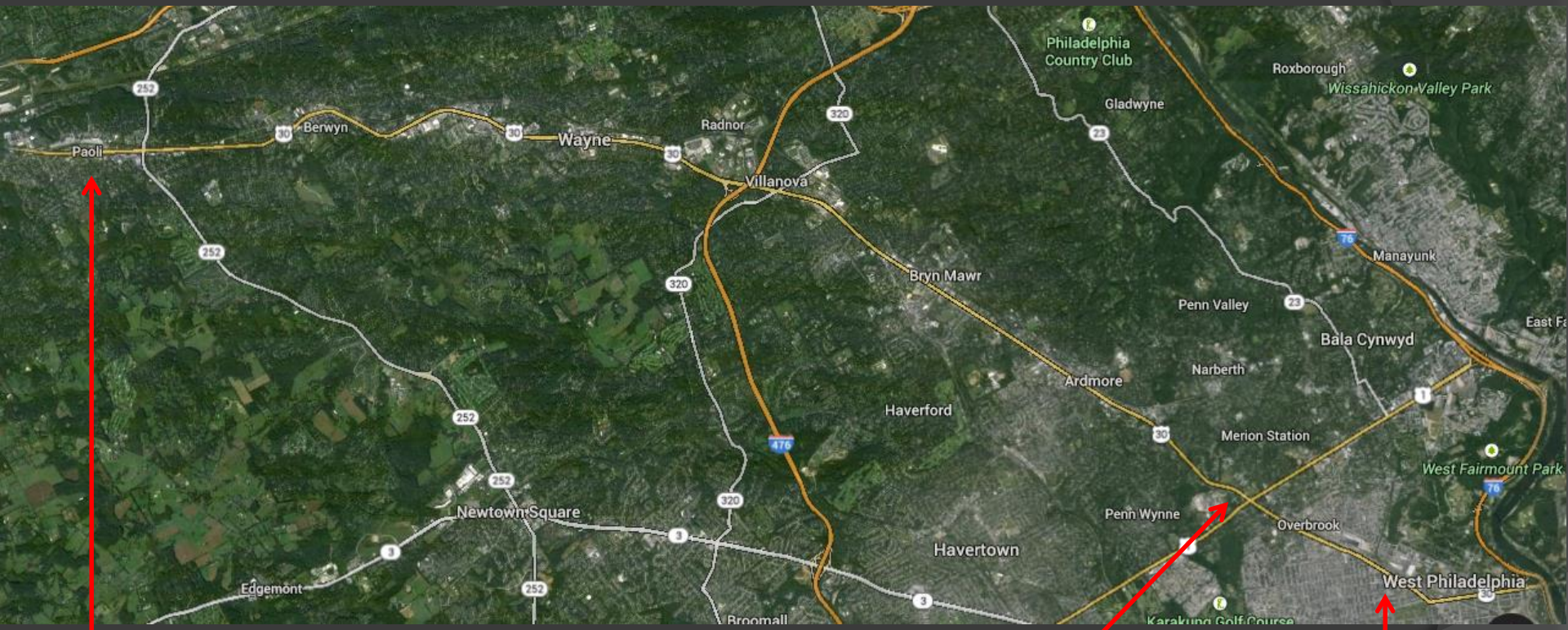
Overbrook

Philadelphia

Philadelphia Main Line (Overbrook station)

Photograph by other

Merion



Paoli

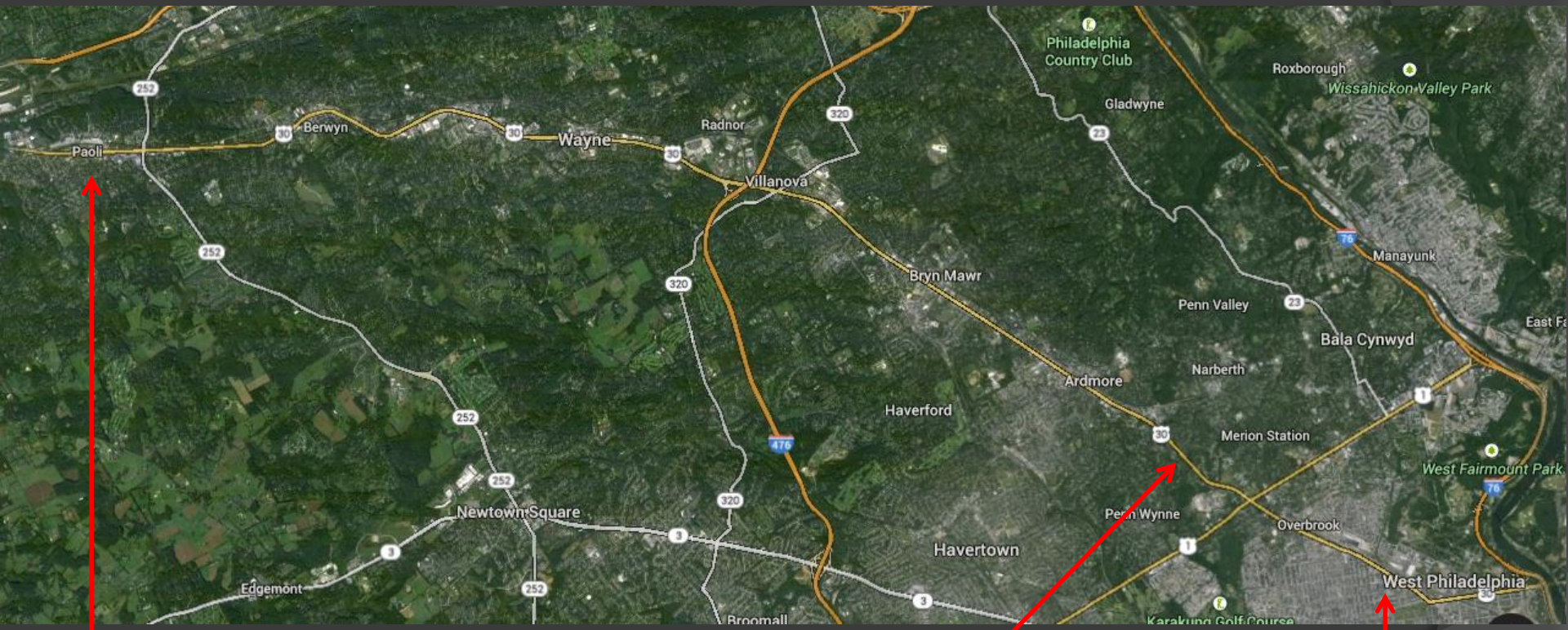
Merion

Philadelphia

Philadelphia Main Line (Merion station)

Photograph by other

Narberth



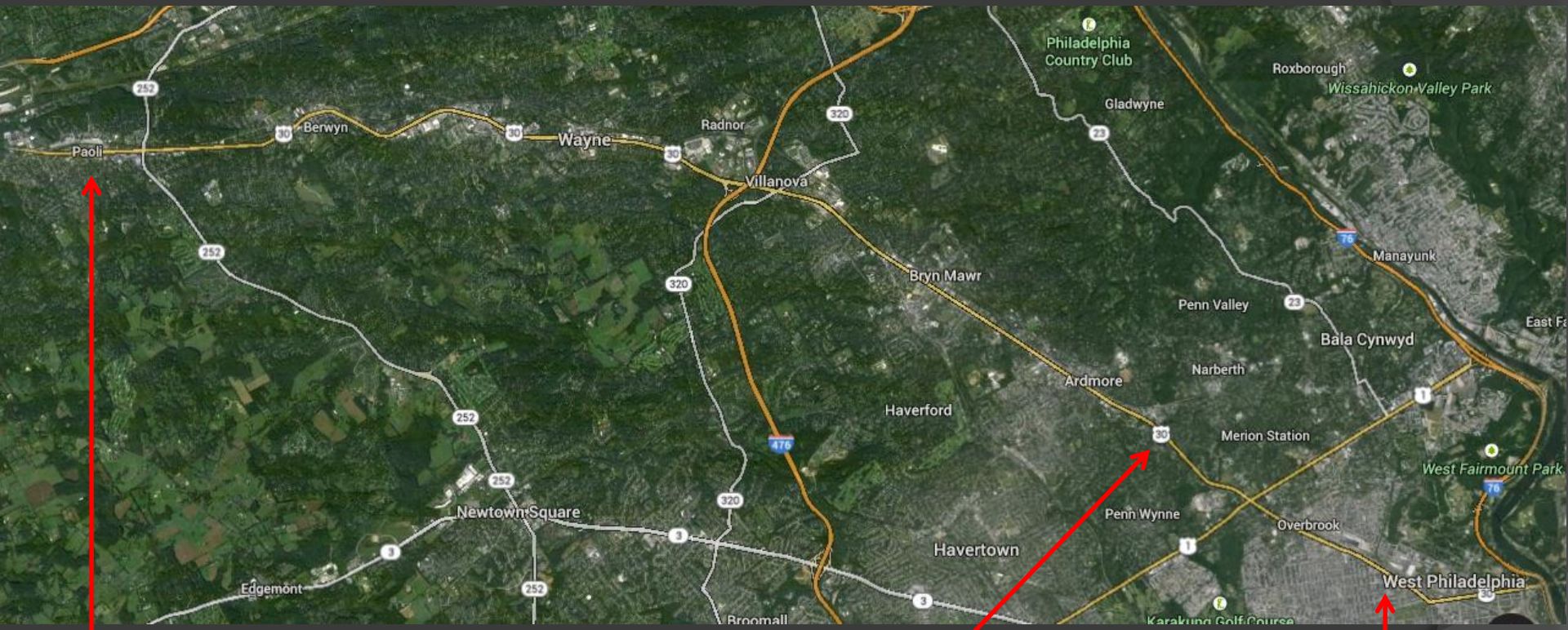
Paoli

Narberth

Philadelphia

Philadelphia Main Line (Narberth station)

Wynnwood



Paoli

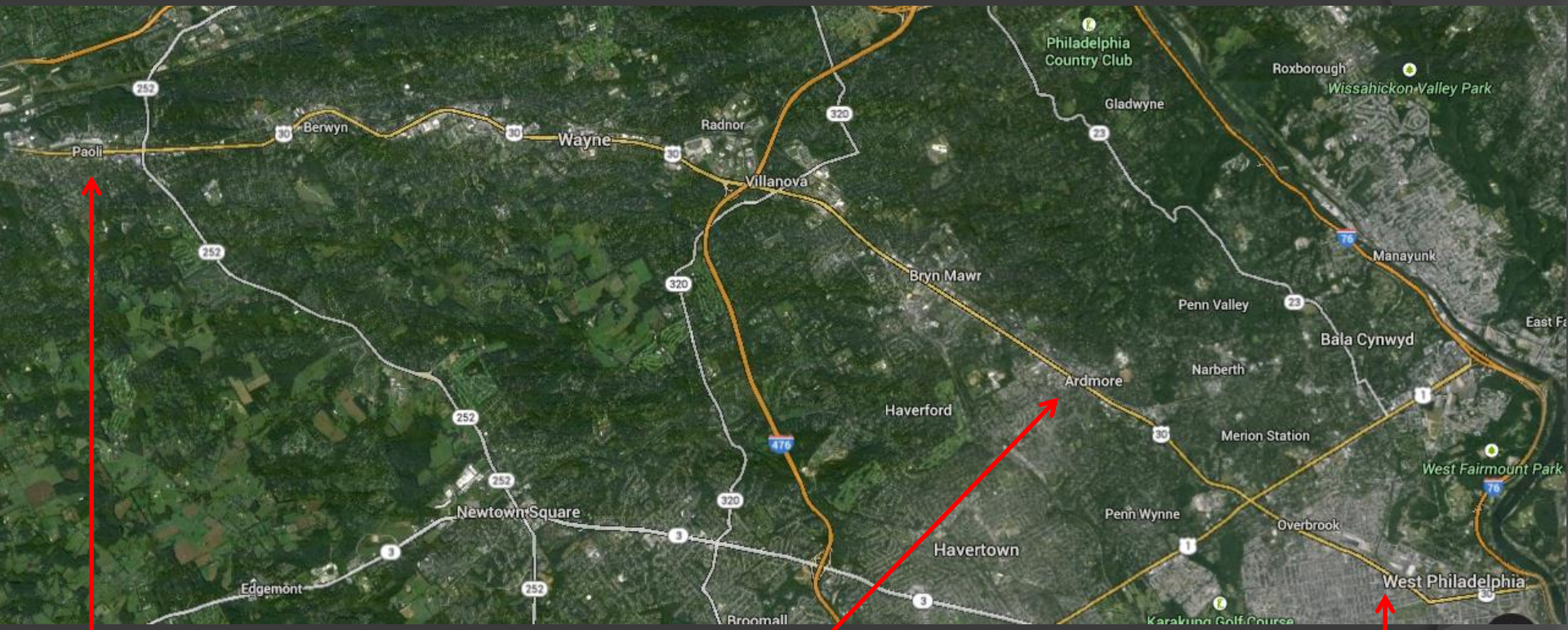
Wynnwood

Philadelphia

Philadelphia Main Line (Wynnwood station)

Photograph by other

Ardmore



Paoli

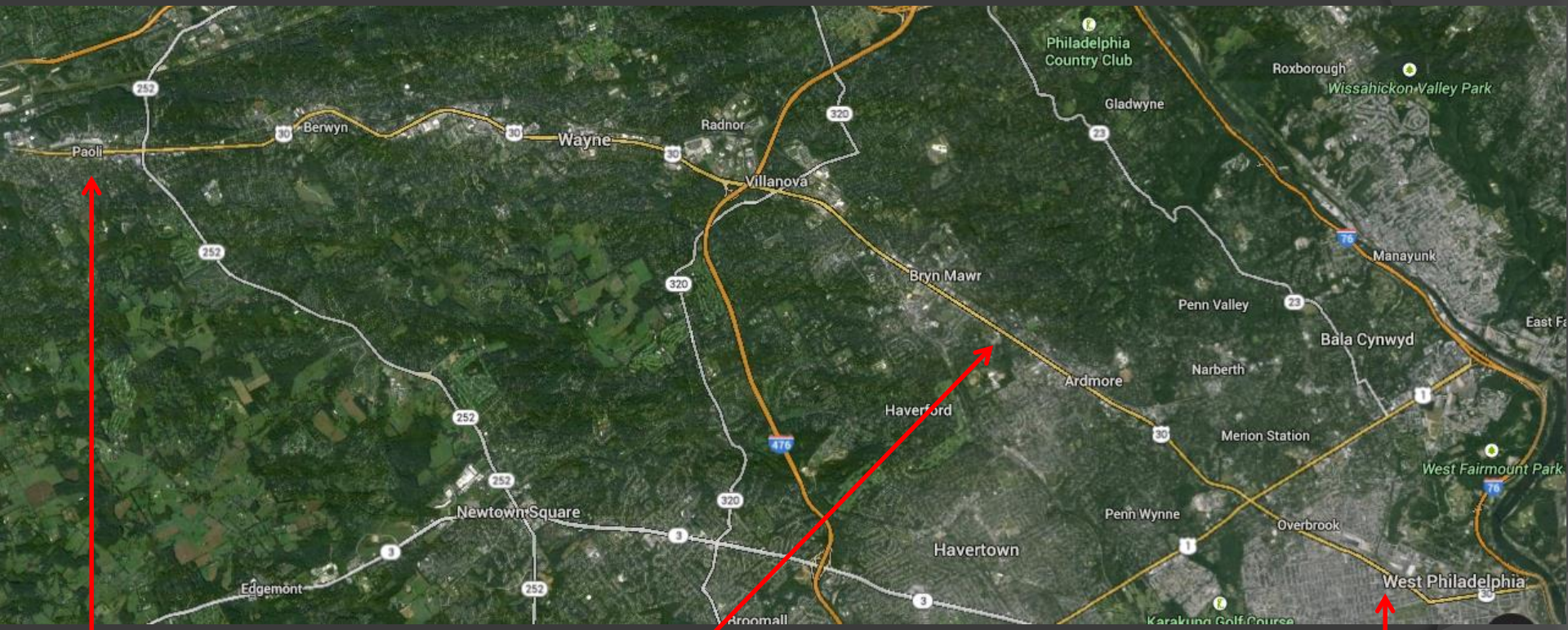
Ardmore

Philadelphia

Philadelphia Main Line (Ardmore station)

ARDMORE STATION.

Haverford



Havorford

Paoli

Philadelphia

Philadelphia Main Line (Haverford station)

Photograph by other

Haverford

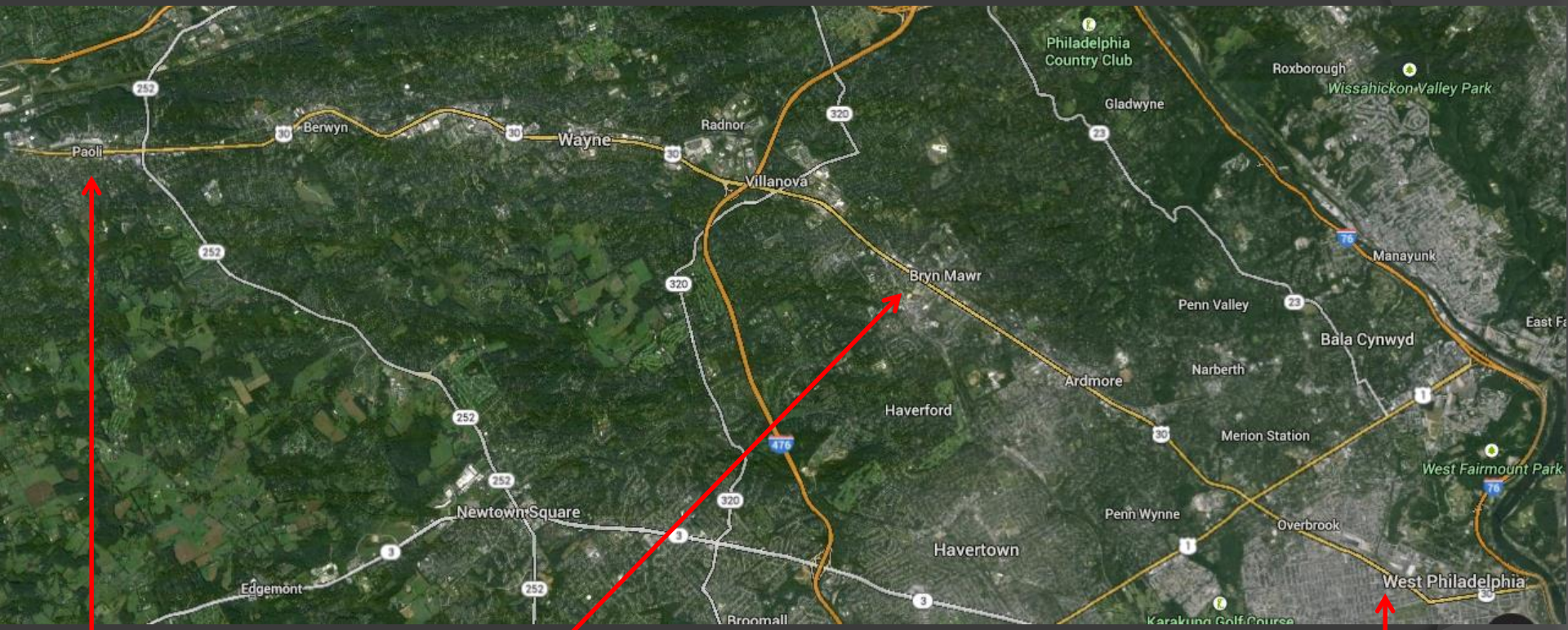
- Mansion repurposed as retirement housing

“The Quadrangle”

Haverford

Haverford

Bryn Mawr



Bryn Mawr

Paoli

Philadelphia

Philadelphia Main Line (Bryn Mawr station)

Photograph by other

Bryn Mawr

- Mansion repurposed as an elementary school
  “Sacred Heart Academy”

Bryn Mawr

- Mansion repurposed as an elementary school
  “Saint Aloysius Academy”

Bryn Mawr

- Mansion repurposed as an elementary school
  “Saint Aloysius Academy”

Bryn Mawr

Bryn Mawr

Bryn Mawr

Bryn Mawr


Bryn Mawr


Bryn Mawr

Bryn Mawr

This Mansion is now surrounded by a condominium complex

Bryn Mawr

Condominium

Bryn Mawr

Condominium design influenced by mansion

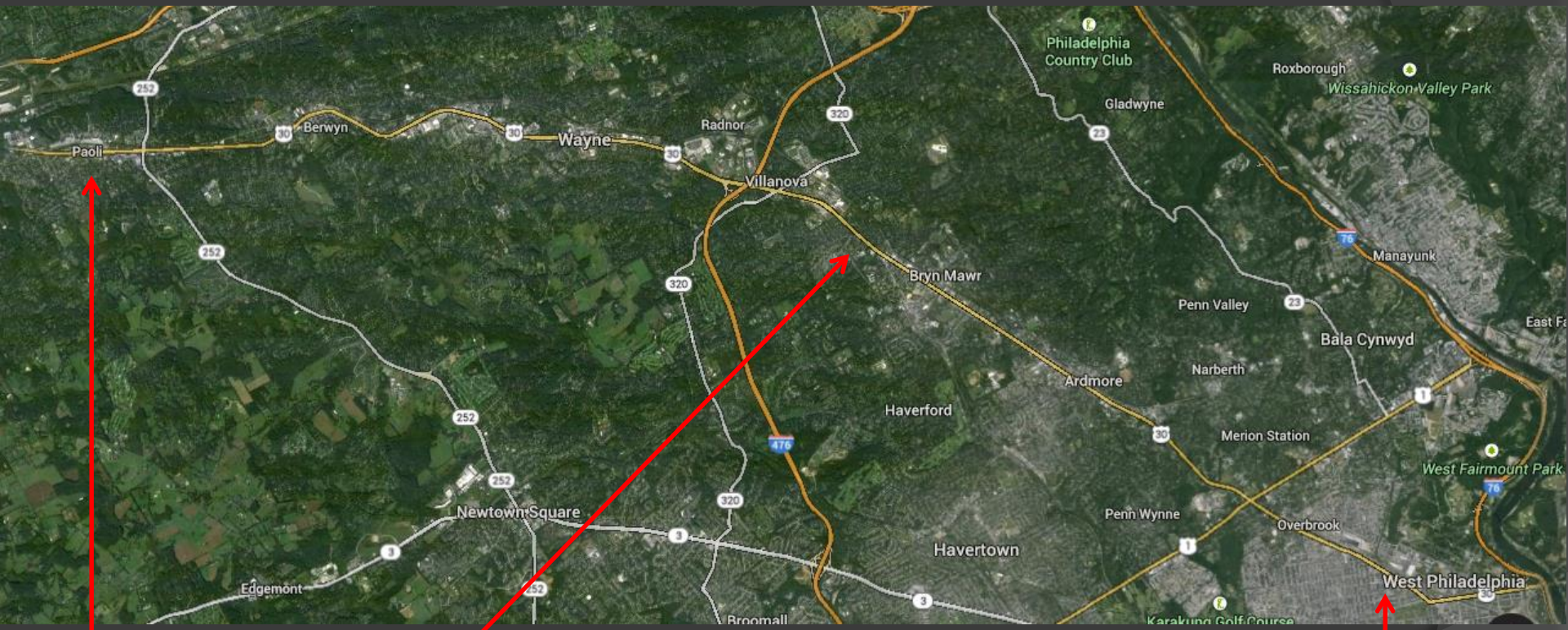
Bryn Mawr

A remaining **gate-house to a torn-down mansion**

Bryn Mawr

A remaining **gate-house to a torn-down mansion**

Rosemont



Rosemont

Paoli

Philadelphia

Philadelphia Main Line (Rosemont station)

Photograph by other

Rosemont

Rosemont College

Rosemont

Rosemont

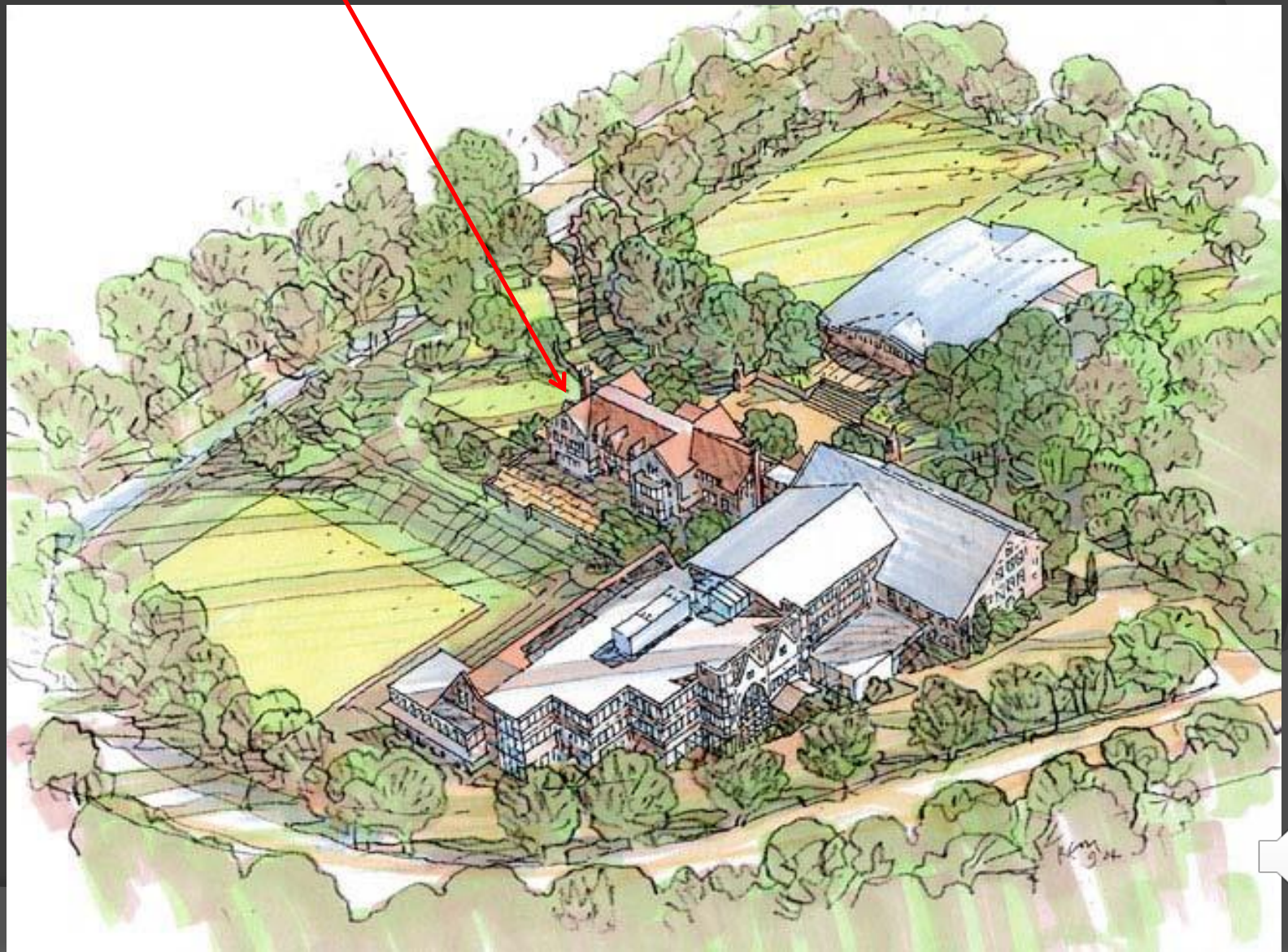
Repurposed Mansion

Rosemont

Repurposed Mansion

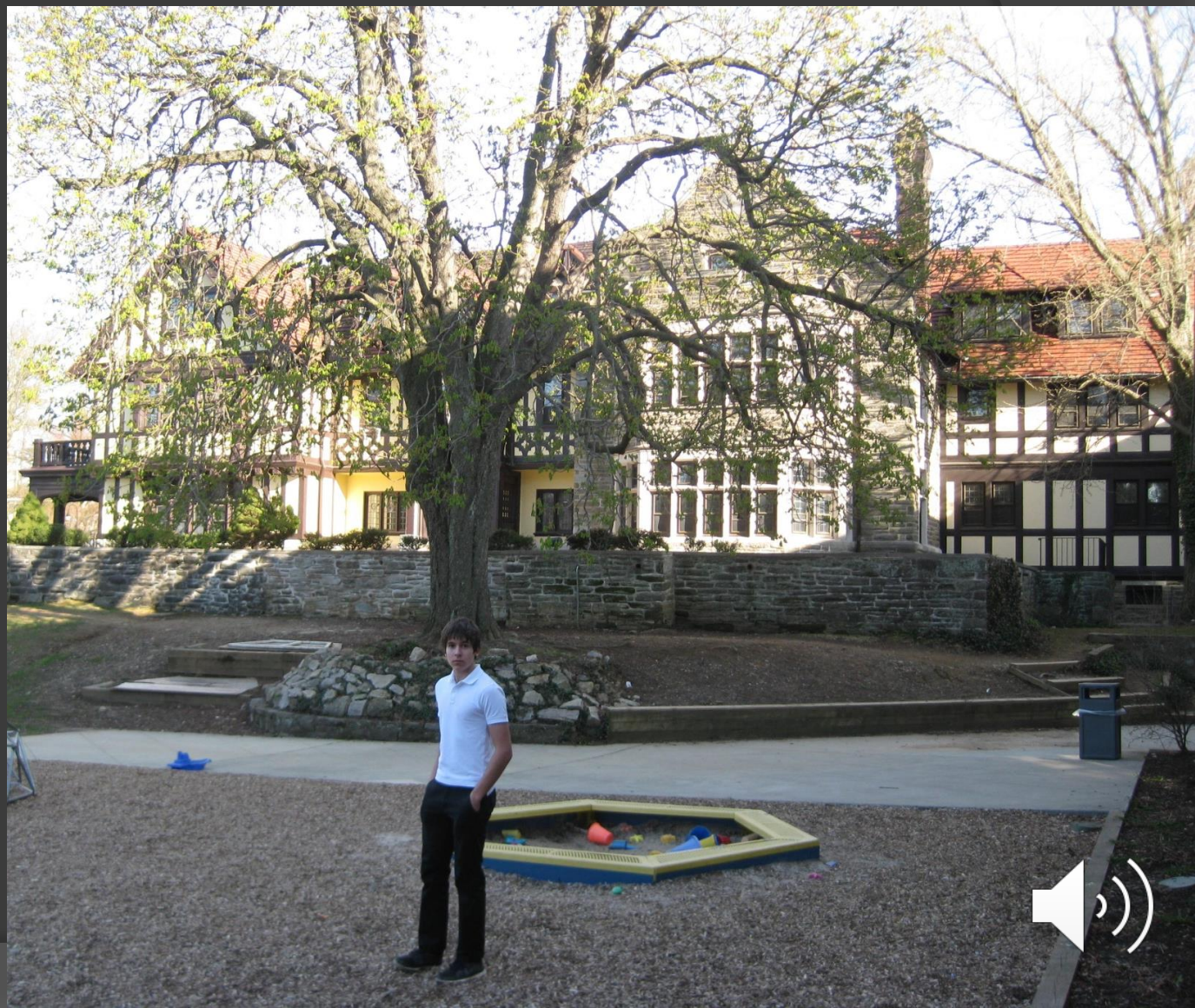
Rosemont

Repurposed Mansion



Rosemont

Repurposed Mansion



Rosemont

Repurposed Mansion

Rosemont

Rosemont College

Rosemont

Rosemont College

Rosemont

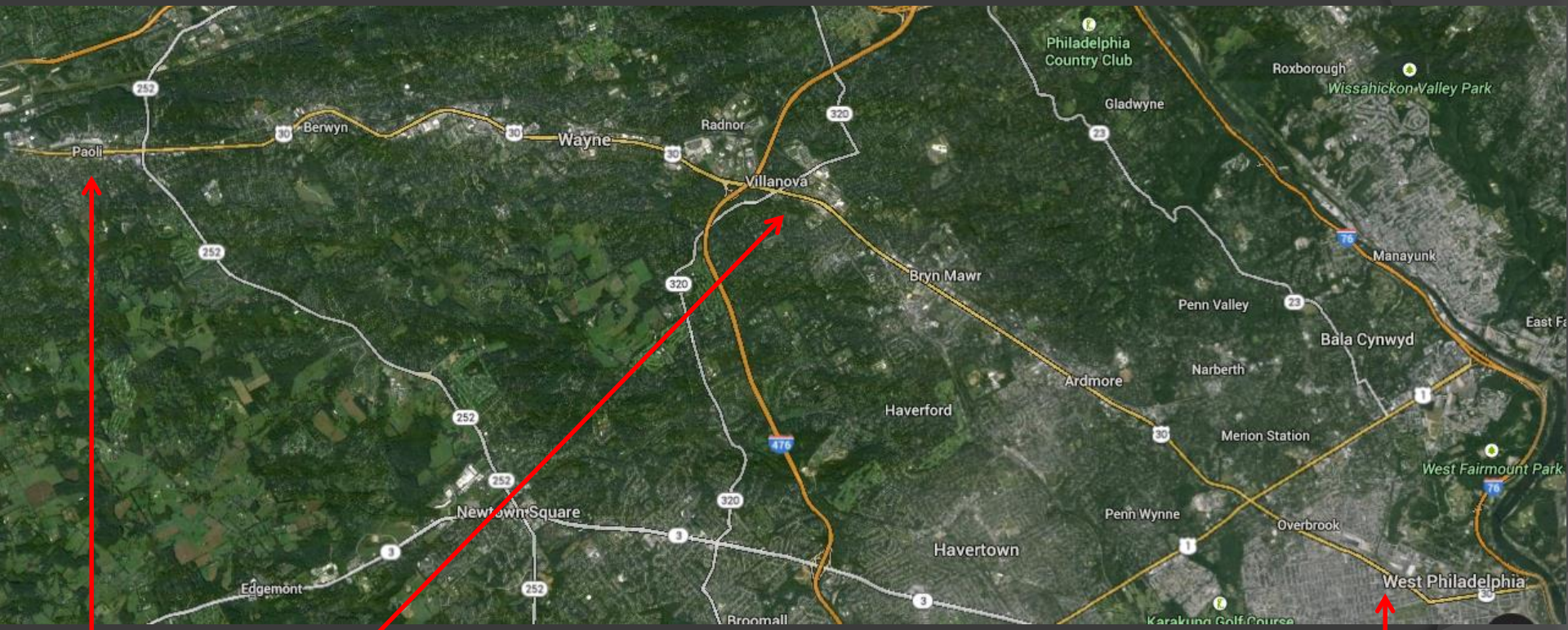
Repurposed Mansion

Rosemont College

Video: http://www.youtube.com/watch?v=UiKEc4VxAvA

Photograph by other

Villanova



Villanova

Paoli

Philadelphia

Philadelphia Main Line (Villanova station)

Photograph by other

Villanova University Chapel

Photograph by other

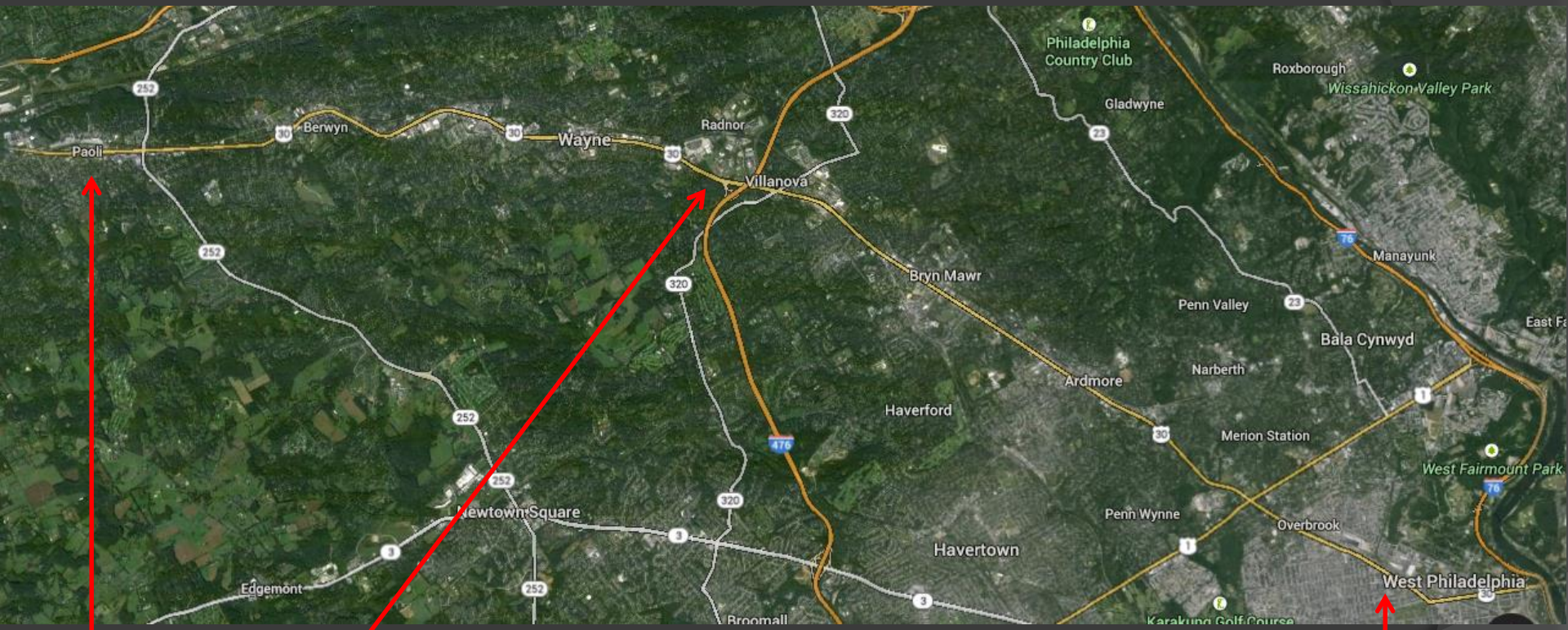
Villanova: Academy-notre Dame De Namur

Repurposed Mansion

Villanova: Academy-notre Dame De Namur

Repurposed Mansion

Radnor



Radnor

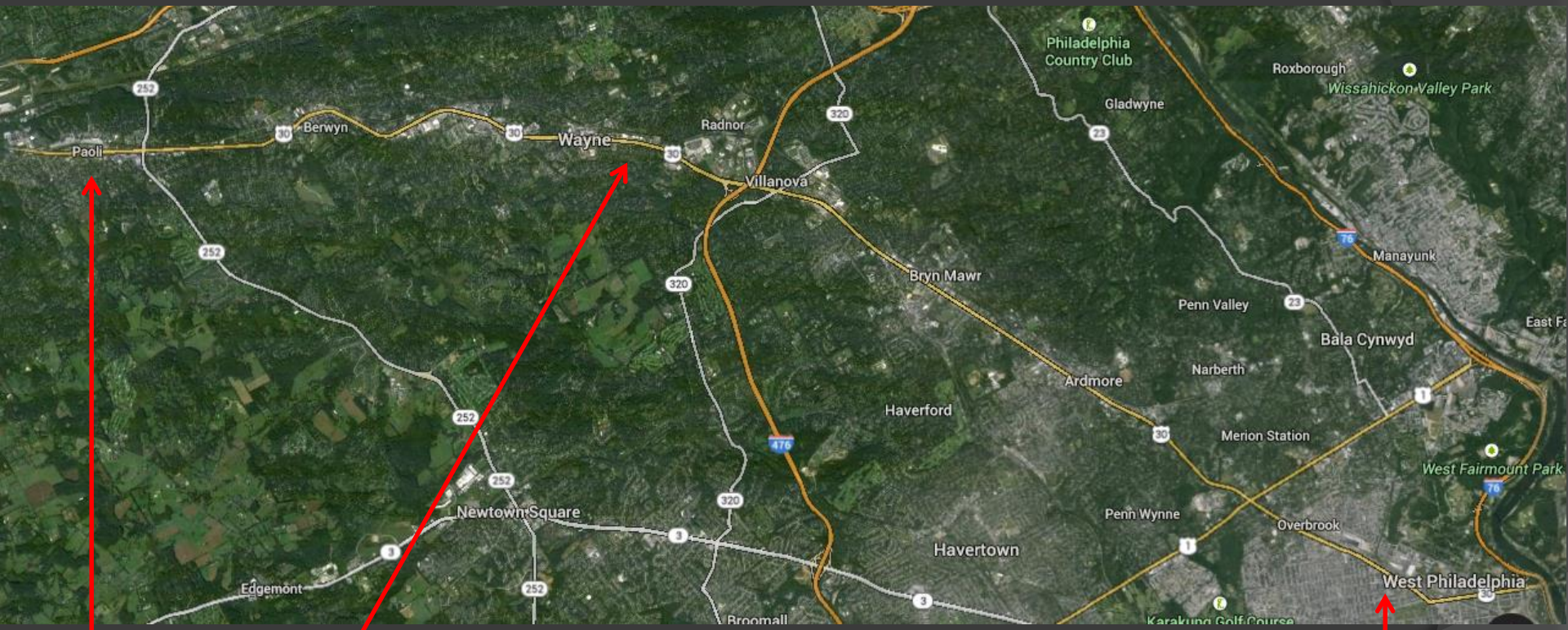
Paoli

Philadelphia

Philadelphia Main Line (Radnor station)

Photograph by other

St. Davids



St. Davids

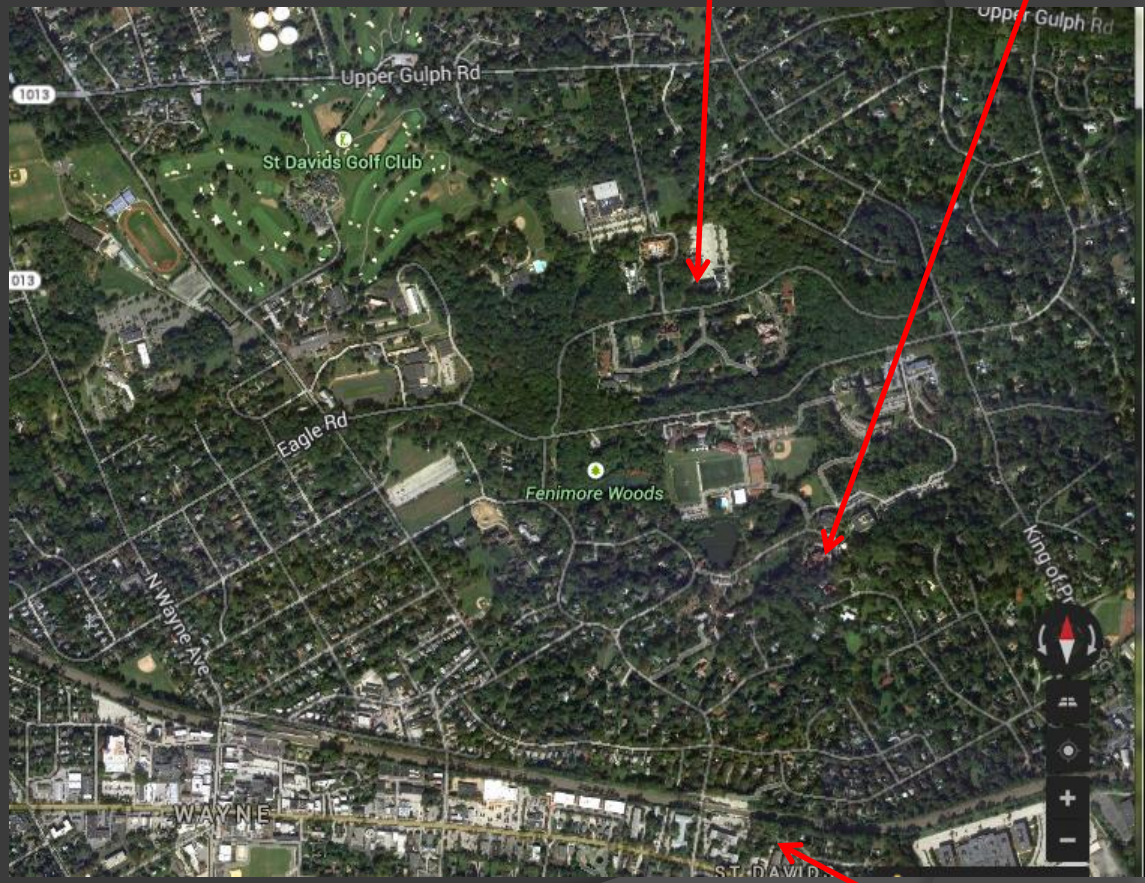
Paoli

Philadelphia

Philadelphia Main Line (St. Davids station)

Eastern University

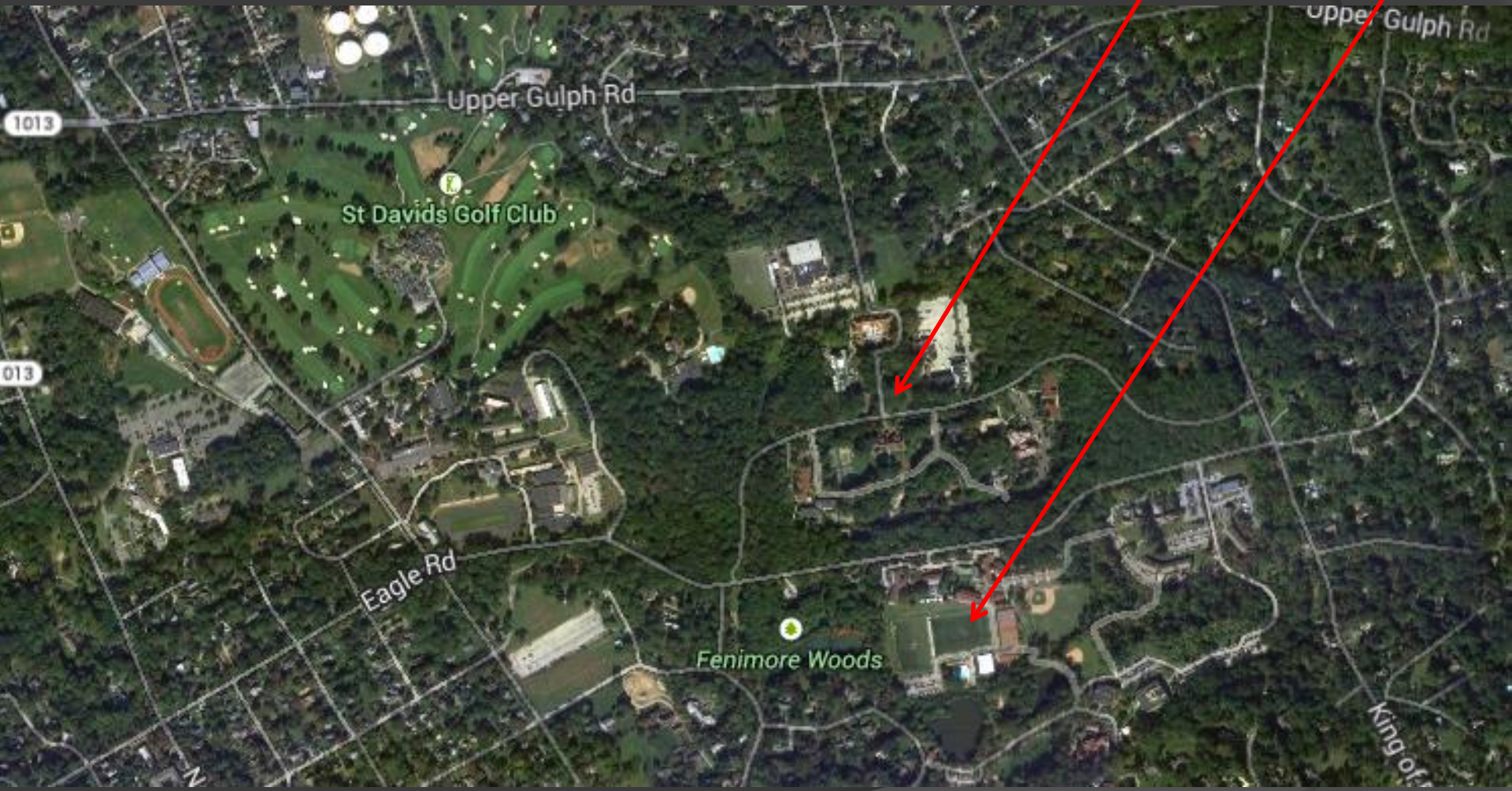
Cabrini College



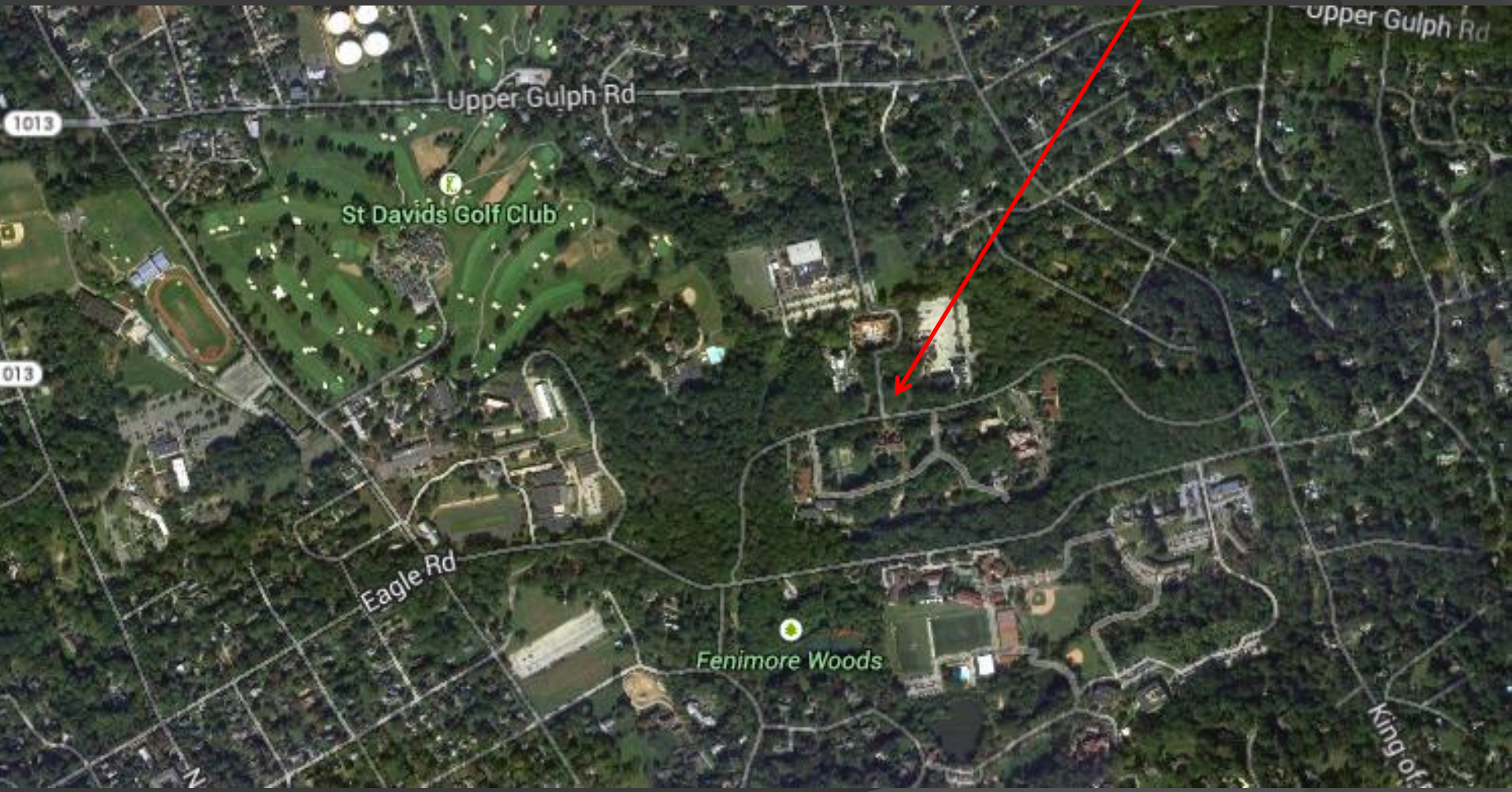
St. David's Train Station

Eastern University

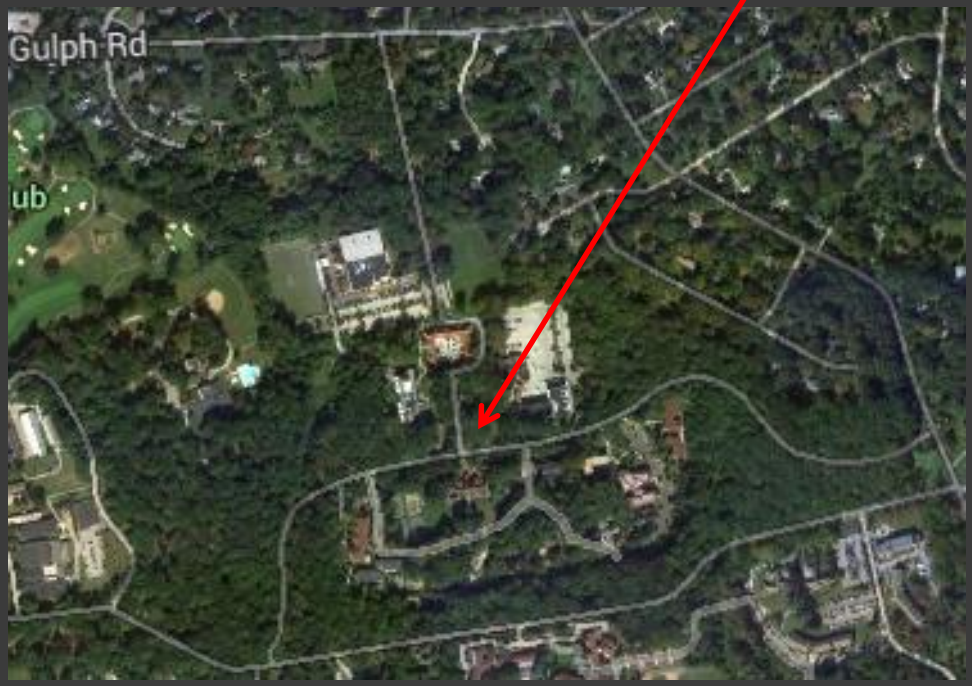
Cabrini College



Cabrini College



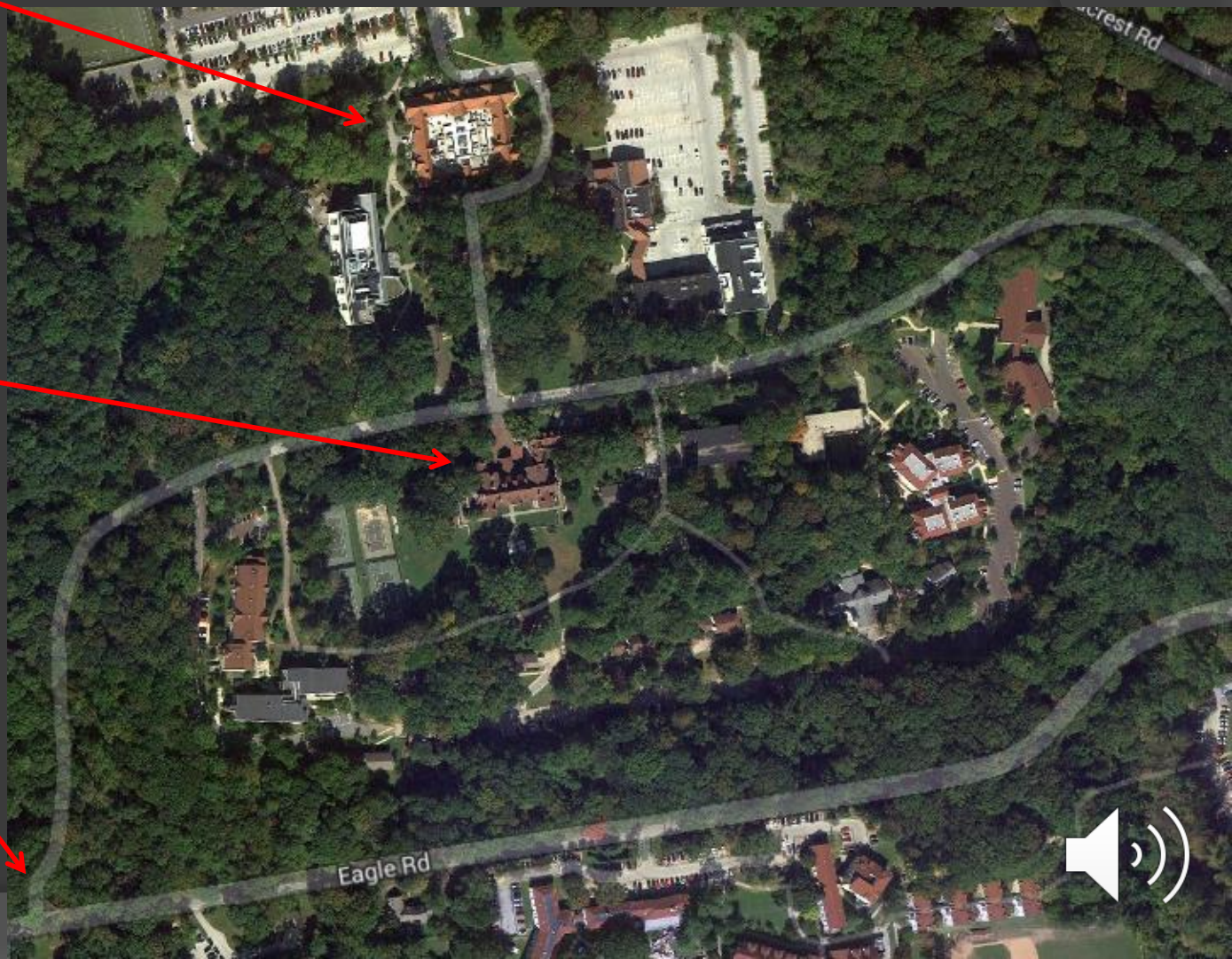
Cabrini College



Cabrini College stables of original estate

Cabrini College mansion of original estate

Cabrini College gate house of original estate



Cabrini College mansion of original estate

Cabrini College mansion of original estate

Cabrini College
mansion of
original estate

Photograph by other

Cabrini College in St. Davids, PA

- Originally a Philadelphia “Main Line” estate (“Woodcrest”) in 1907
- Architect Horace Trumbauer 1868-1938
- Elizabethan -Tudor Style

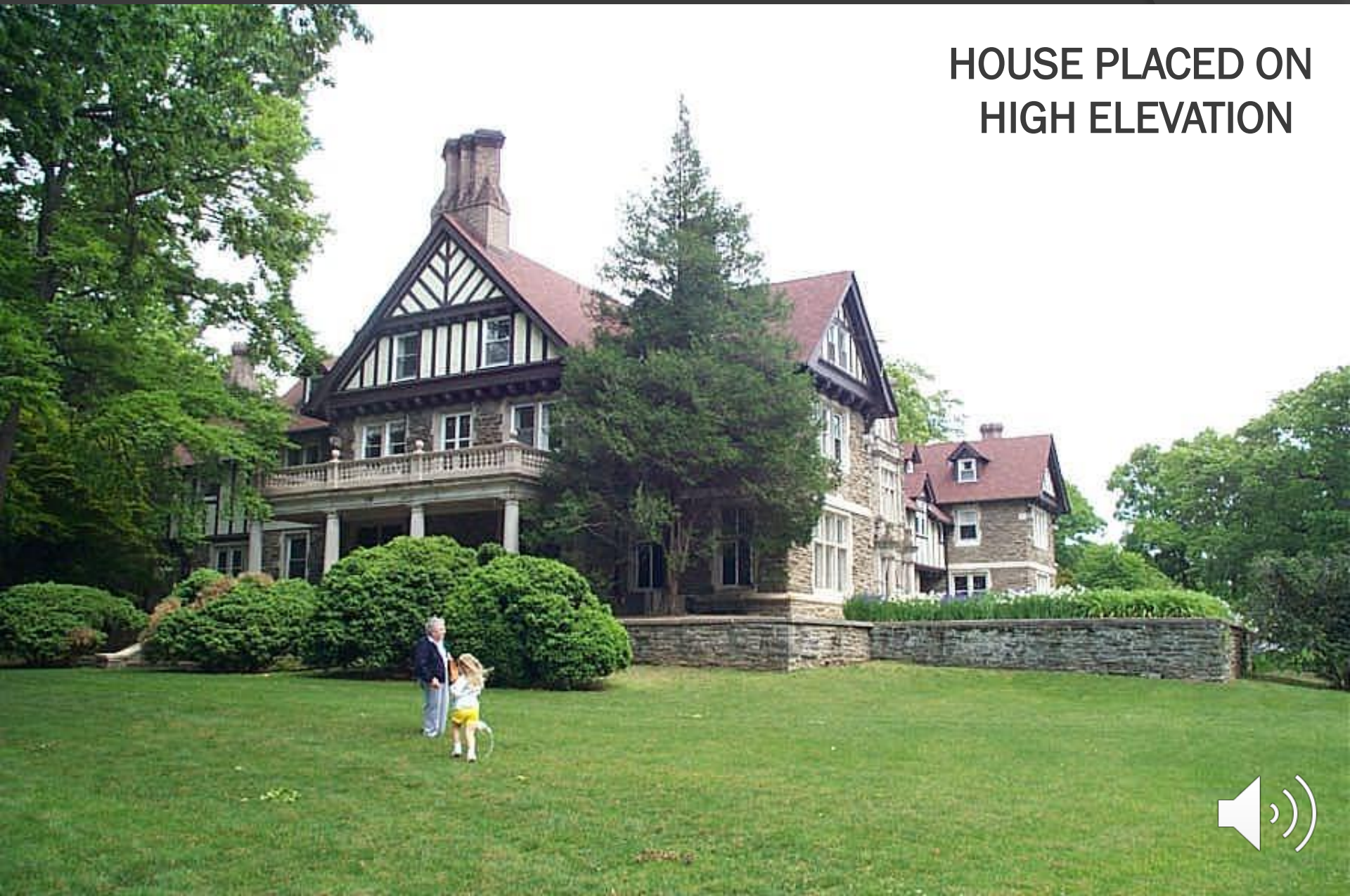
- Be inspired by something grand
- Scale down to reality
  - But be loyal to style, quality, and details
- Conform to environment
  - Terrain, trees, climate, architectural vernacular

Cabrini College

SITE PLANNING AND LANDSCAPE ARCHITECTURE

Photograph by other

Cabrini College



Cabrini College

Cabrini College

Cabrini College

TERRACED GARDEN

Cabrini College

Cabrini College

Cabrini College

Cabrini College

BRICK PAVERS

Cabrini College

Cabrini College

WALLED COURTYARD

Cabrini College

Cabrini College

PORTICO

Cabrini College

PORTICO

Cabrini College

PORTICO

Cabrini College

Cabrini College

ROOF GABLES

Cabrini College

DORMERS

Cabrini College

DORMERS

Cabrini College

Cabrini College

ARCH

Cabrini College

Cabrini College

PORCH

Cabrini College

Cabrini College

ENCLOSED PORCH

Cabrini College

ENCLOSED PORCH

Cabrini College

BALCONY

Cabrini College

Cabrini College

Cabrini College

BANKS OF WINDOWS

Cabrini College

BANKS OF WINDOWS

Cabrini College

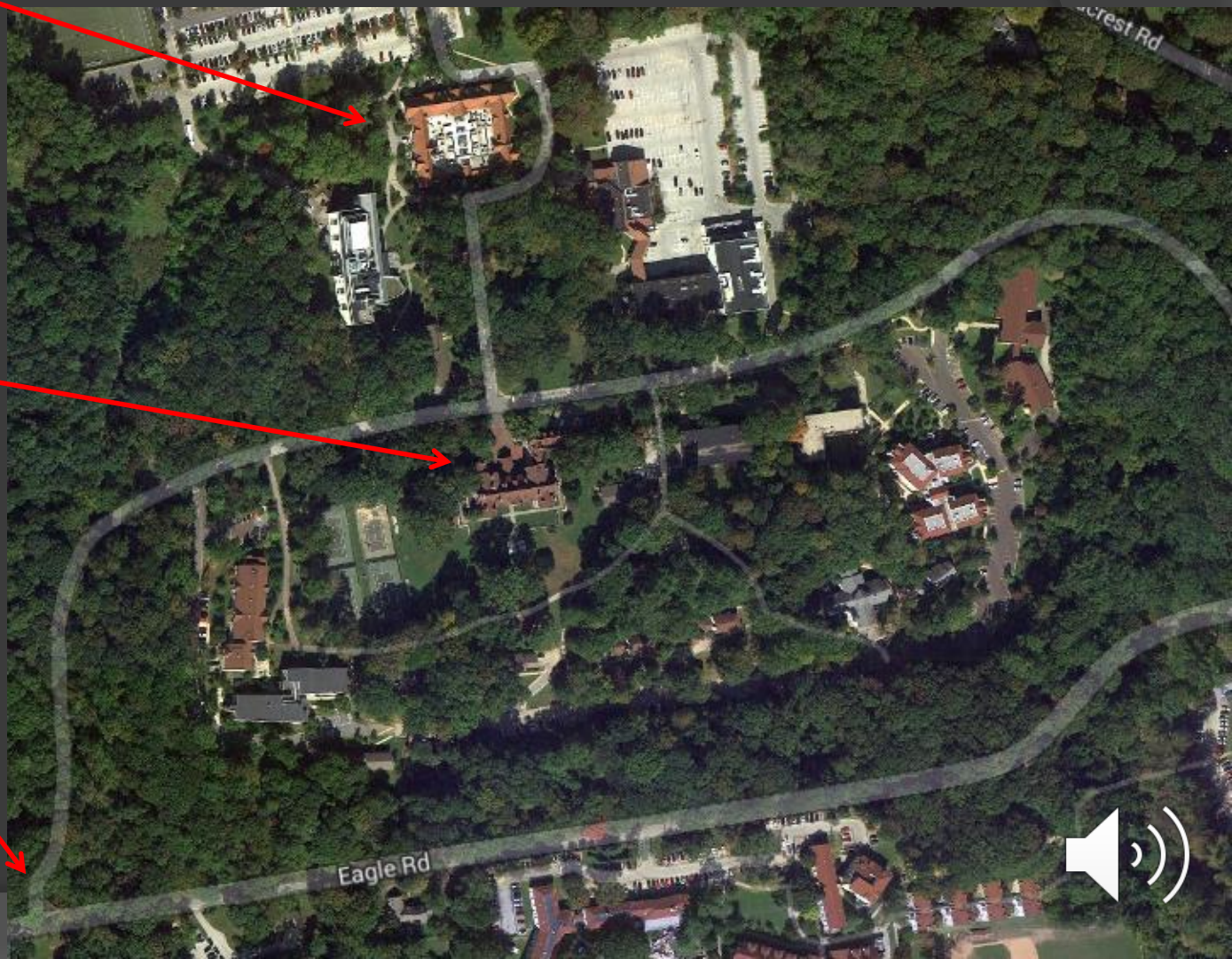
Cabrini College

WINDOWS FOLLOWING STAIRS

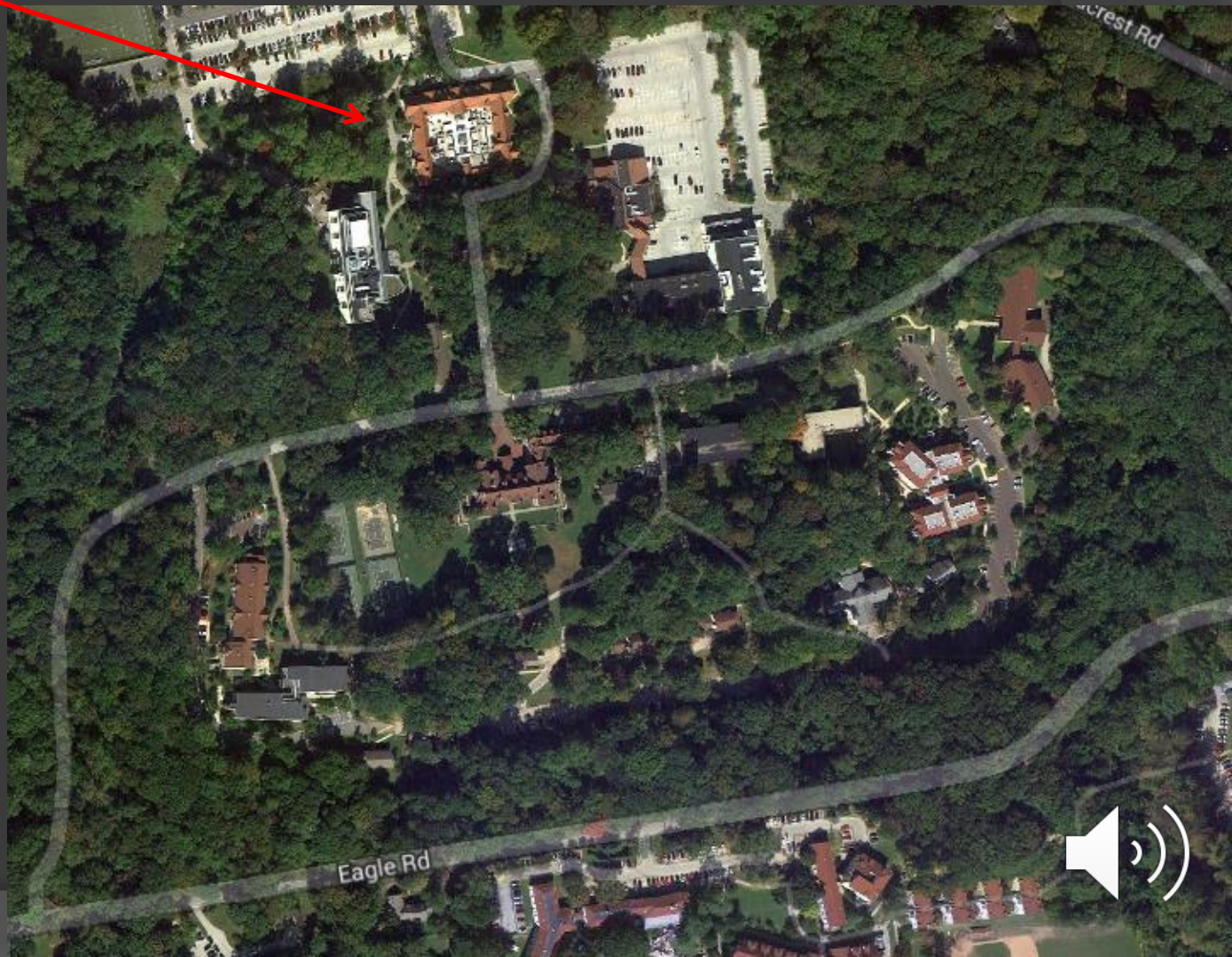
Cabrini College stables of original estate

Cabrini College mansion of original estate

Cabrini College gate house of original estate



Cabrini College stables of original estate



Cabrini College

Cabrini College stables of original estate

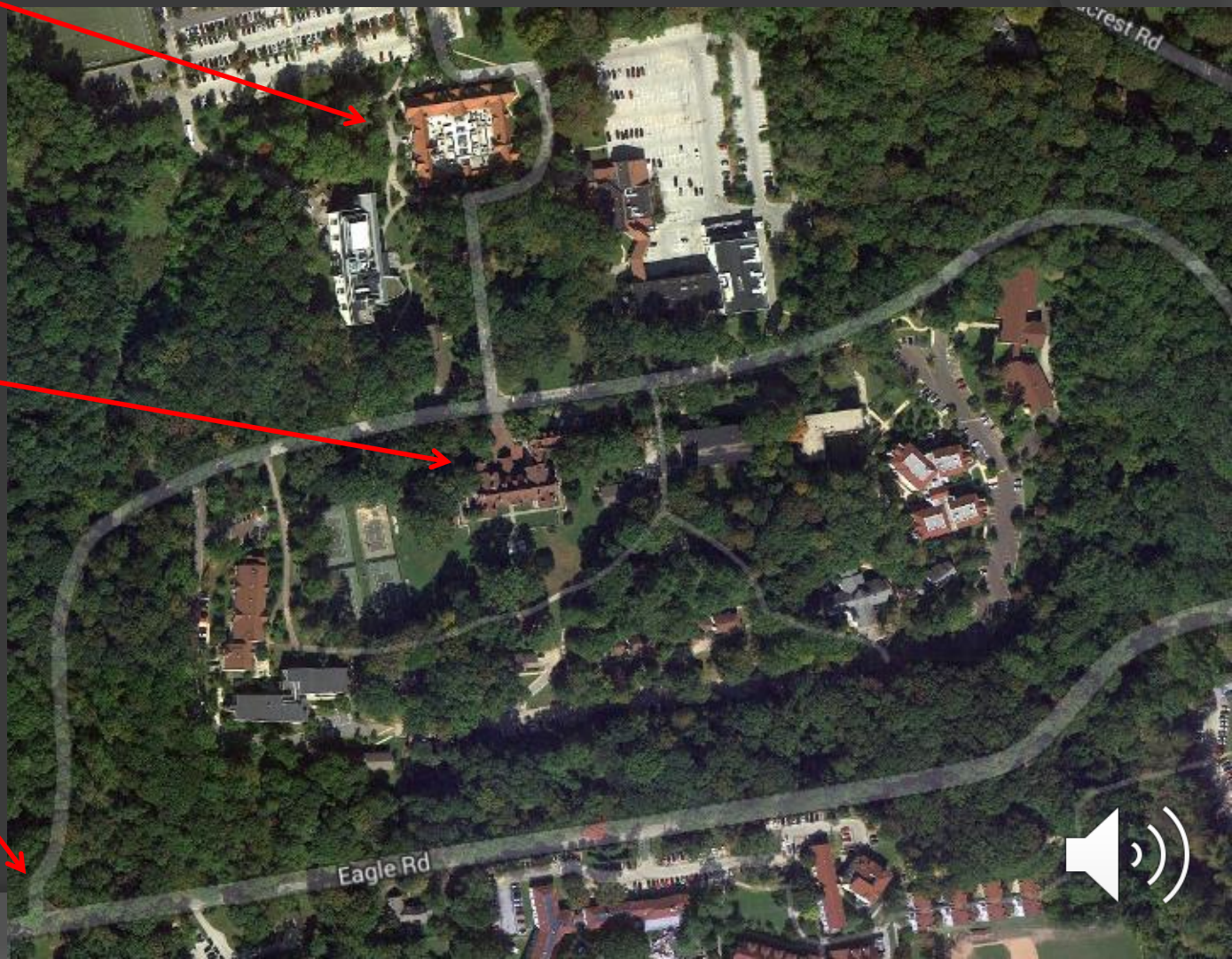
Cabrini College

Cabrini College stables of original estate

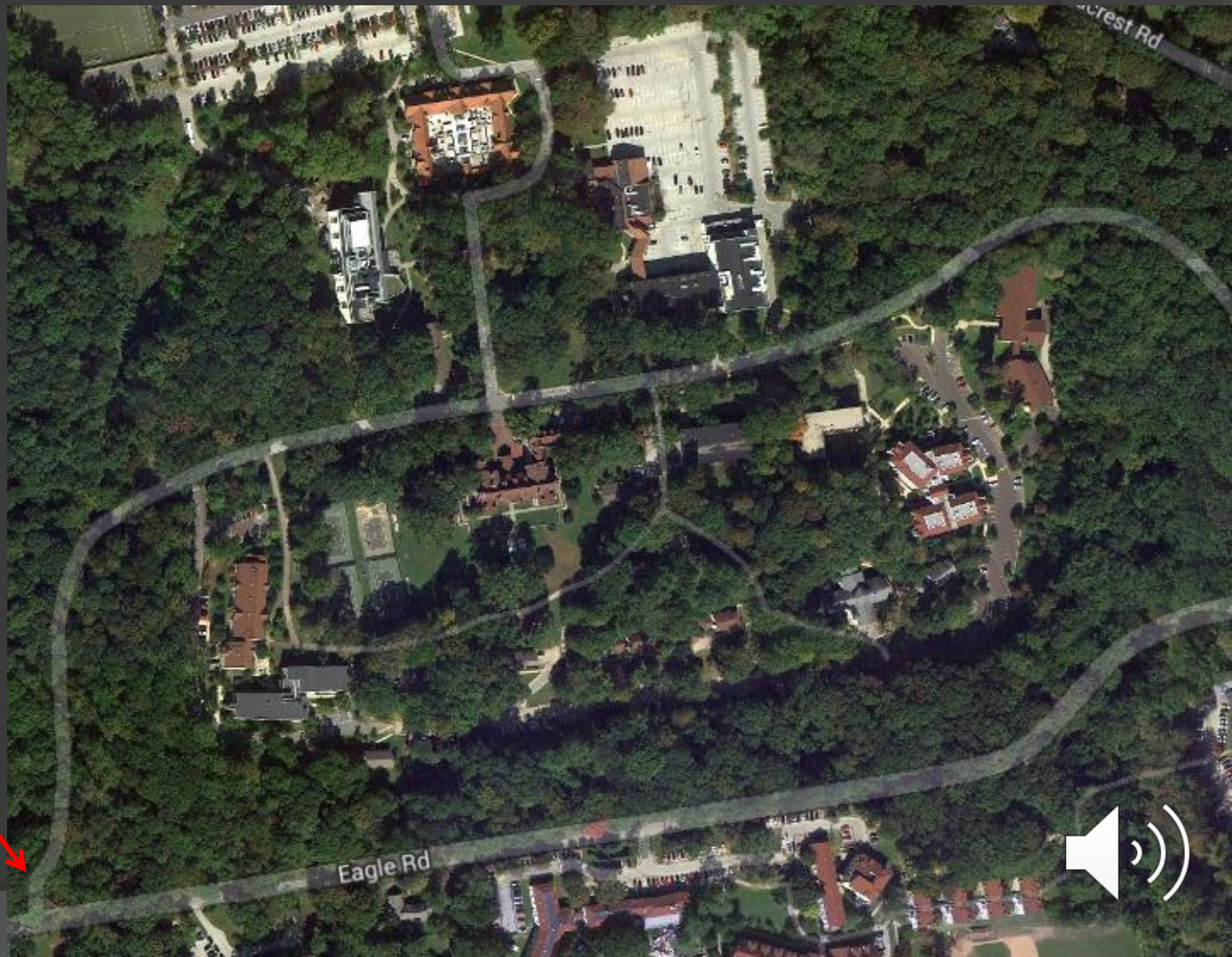
Cabrini College stables of original estate

Cabrini College mansion of original estate

Cabrini College gate house of original estate



Cabrini College gate house of original estate



Cabrini College

Cabrini College gate house of original estate

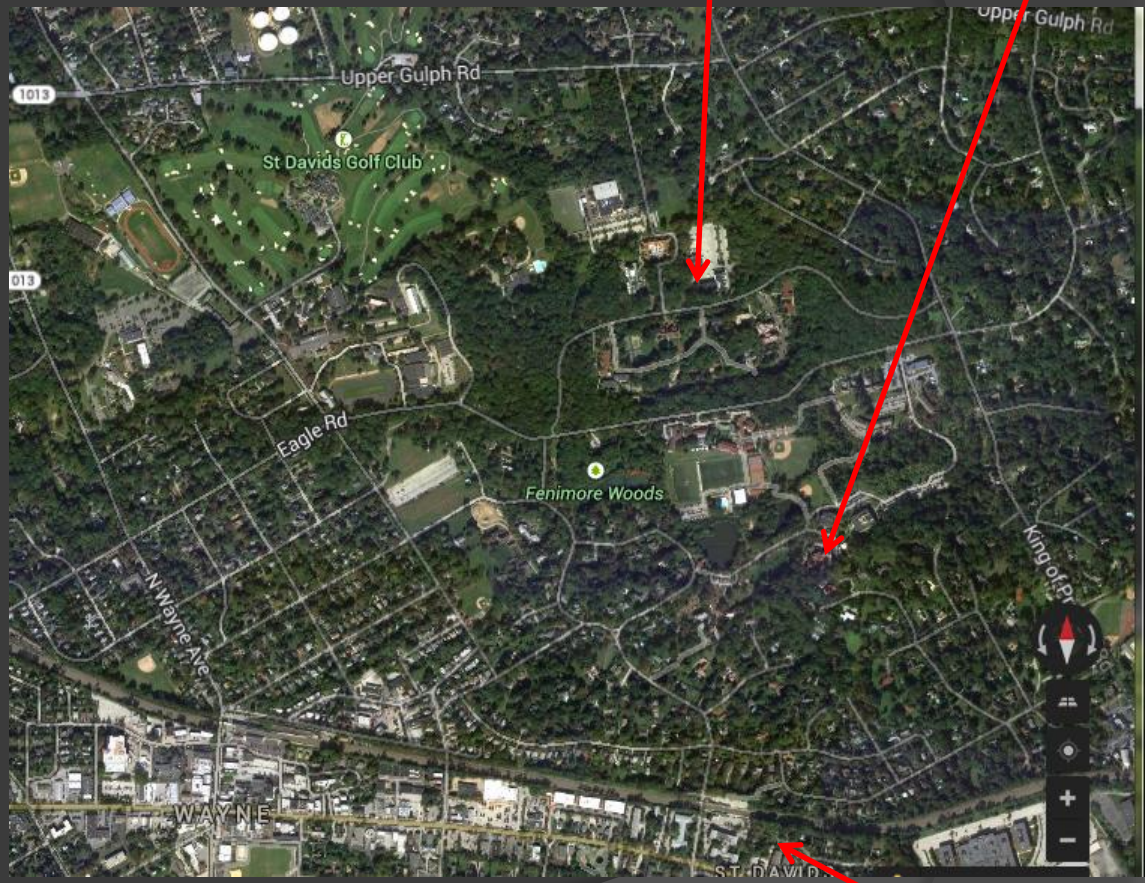
MINI-MANSION

Nearby house resembling Cabrini College Mansion

Nearby house resembling Cabrini College Mansion

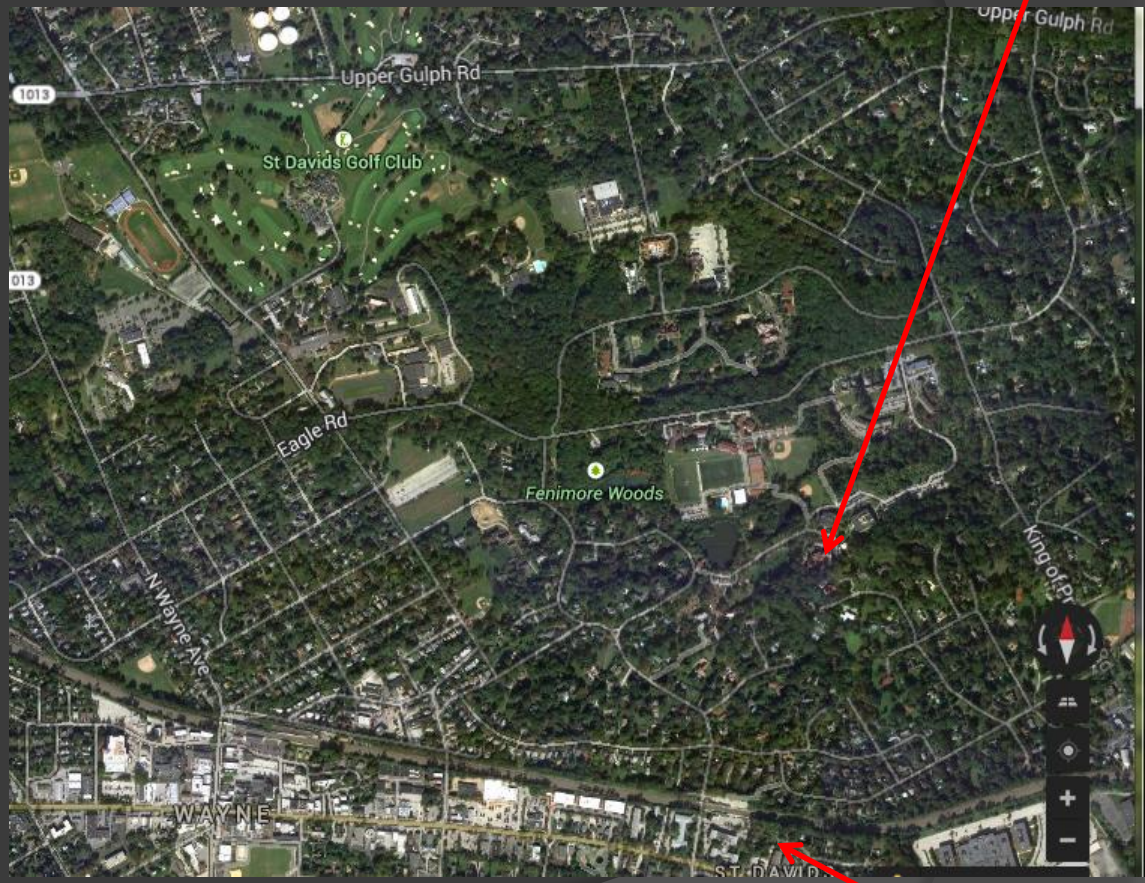
Eastern University

Cabrini College



St. David's Train Station

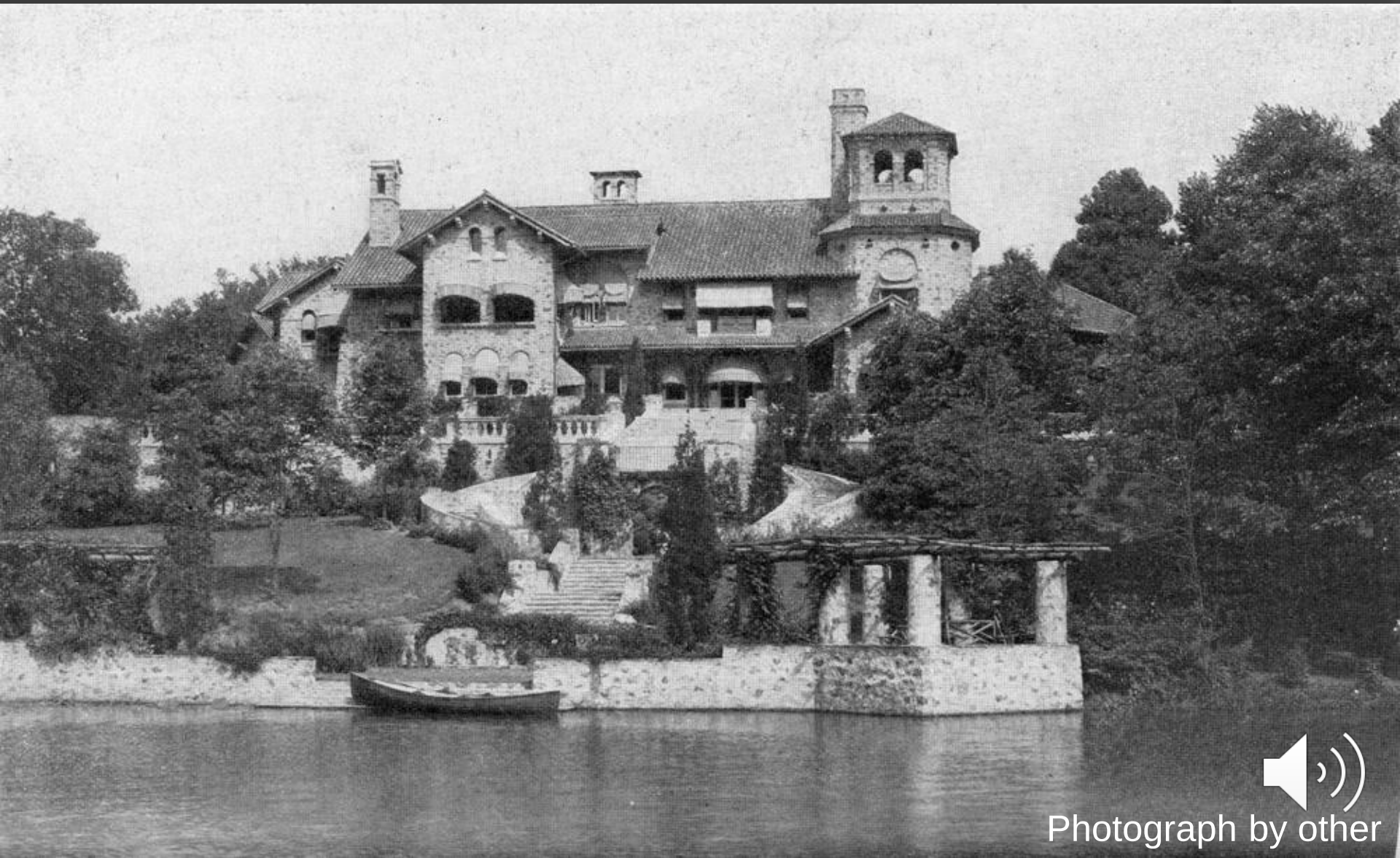
Eastern University



St. David's Train Station

Eastern University

- Originally a Philadelphia “Main Line” estate (“Walmarthan”) in 1913
- Architect David Knickerbacker Boyd 1872-1944 – Spanish Style VIlla

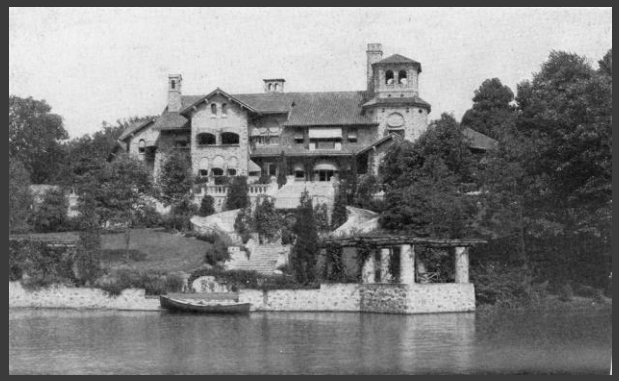


Photograph by other

Compare to Portofino Italy Designs of that period
(similar to Spanish Villas)

Compare to towers in northern Italy

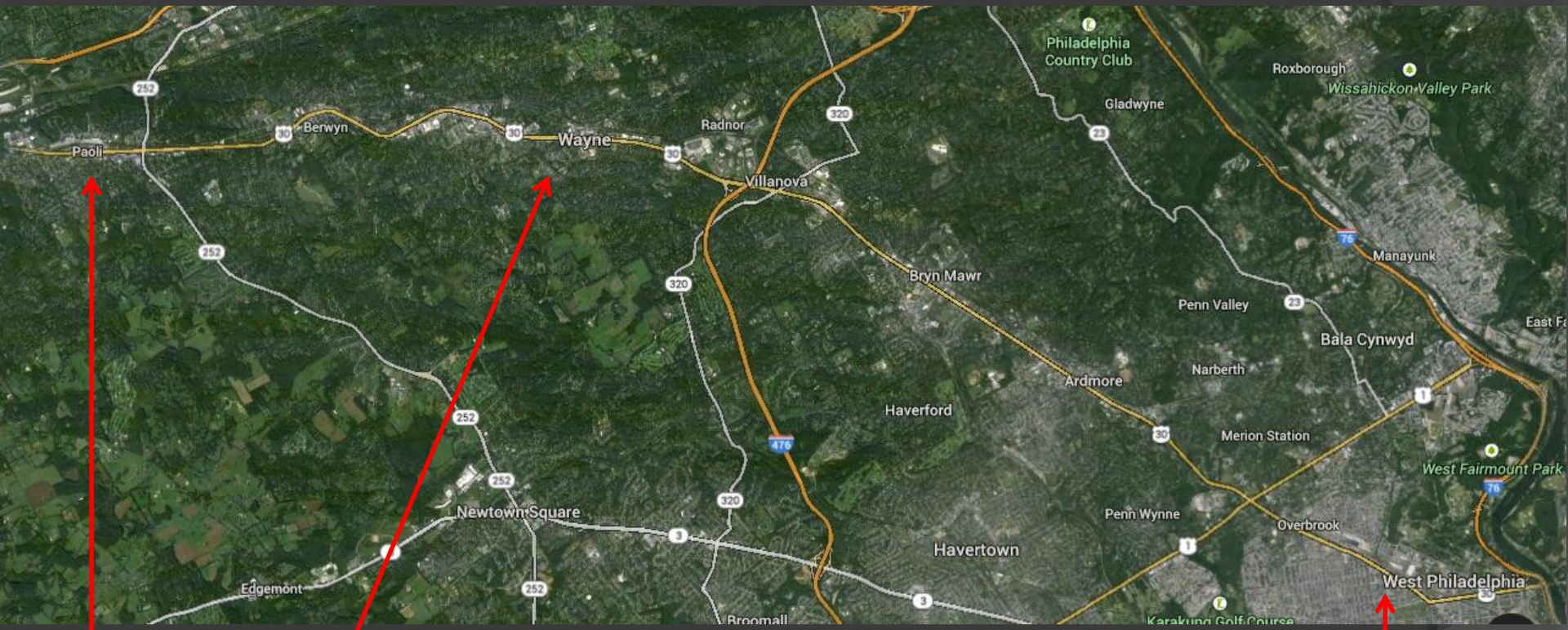
Eastern University – Spanish Villa Influence



← Photographs by others

Italy (similar period)

Wayne



Wayne

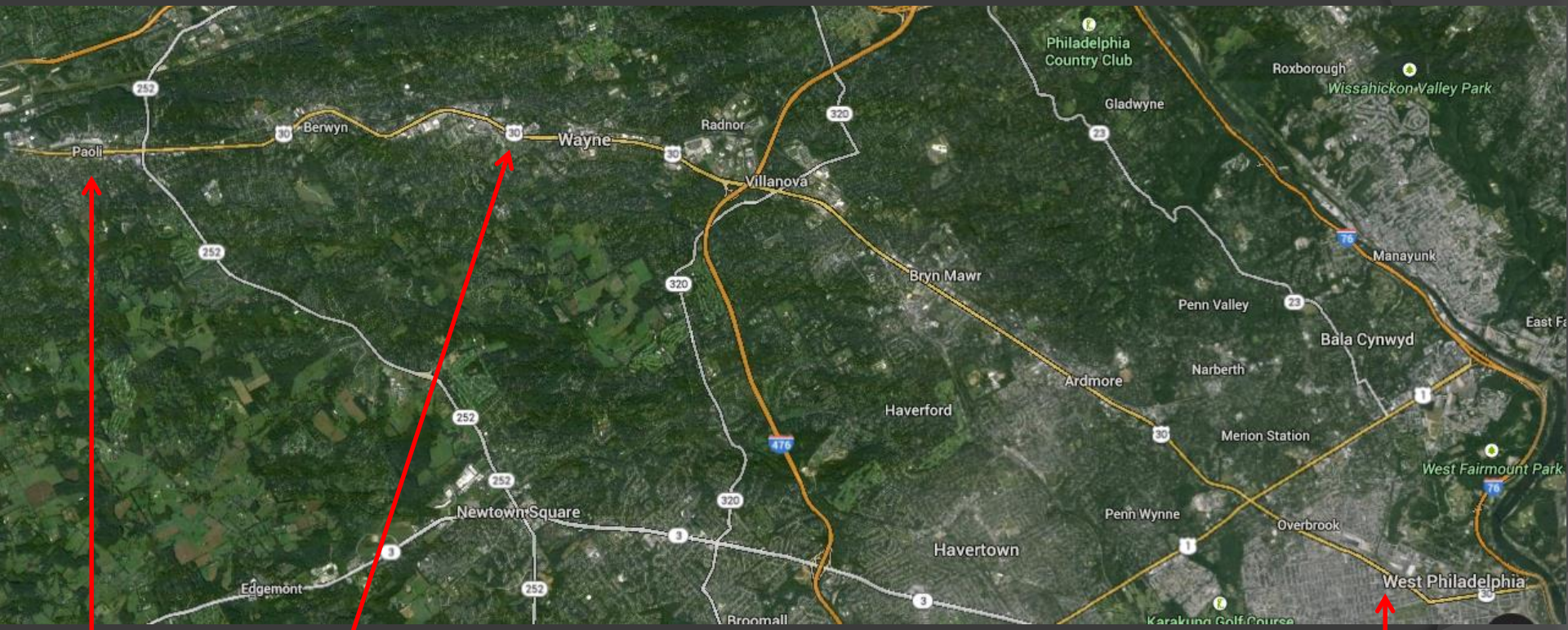
Paoli

Philadelphia

Philadelphia Main Line (Wayne station)

Photograph by other

Strafford



Strafford

Paoli

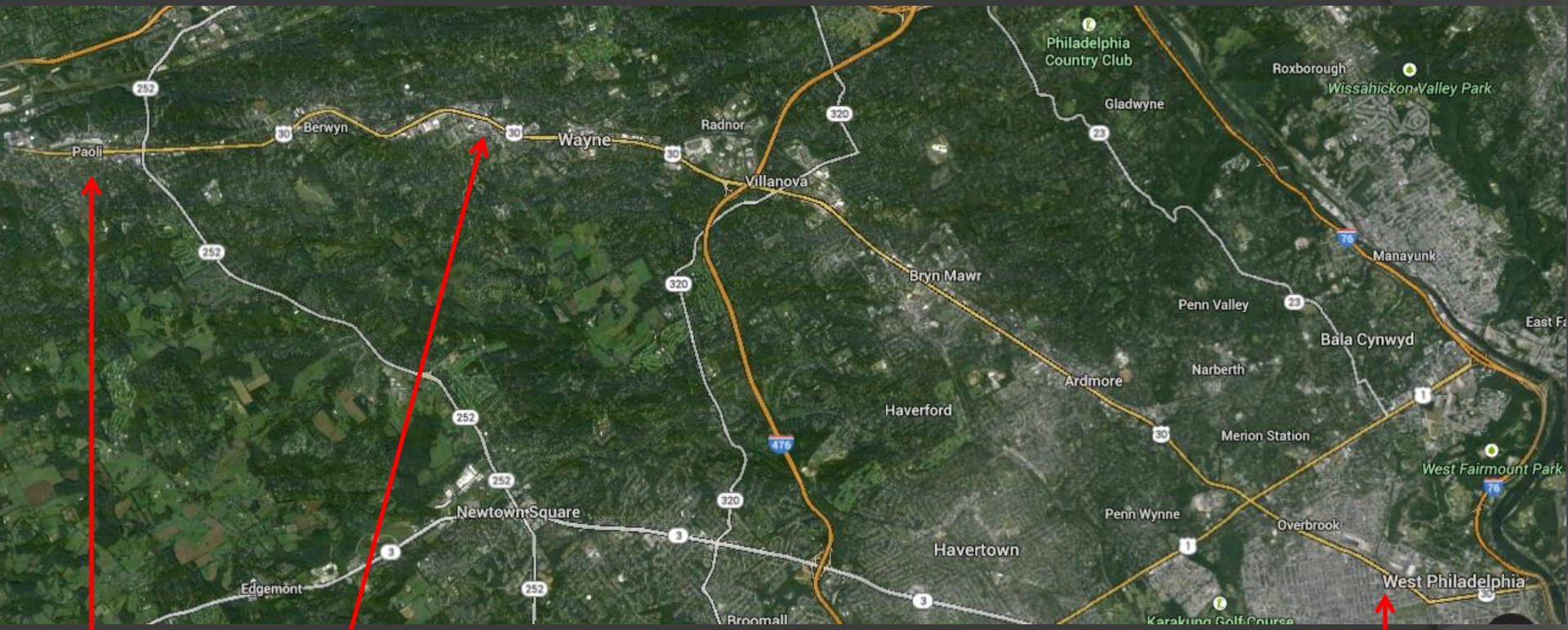
Philadelphia

Philadelphia Main Line (Strafford station)

1876
Victorian Era
Stick-Style

Added to the National Registry of Historic Places in 1984

Devon



Devon

Paoli

Philadelphia

Philadelphia Main Line (Devon station)

Photograph by other

Devon Prep school in Devon, PA
- Repurposed Mansion

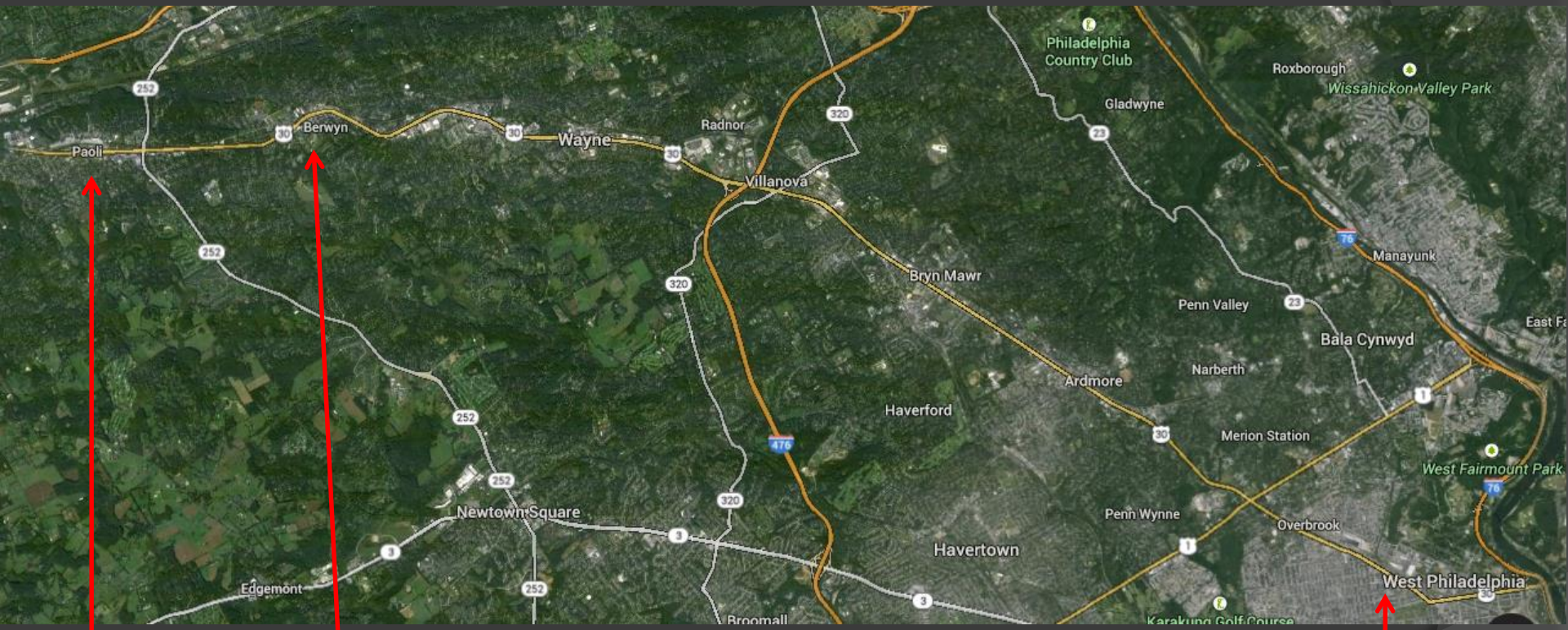
- Be inspired by something grand
- Scale down to reality
  - But be loyal to style, quality, and details
- Conform to environment
  - Terrain, trees, climate, architectural vernacular

Nearby Home in Devon, PA

Devon Prep
Repurposed Mansion

Nearby Home in Devon

Berwyn



Berwyn

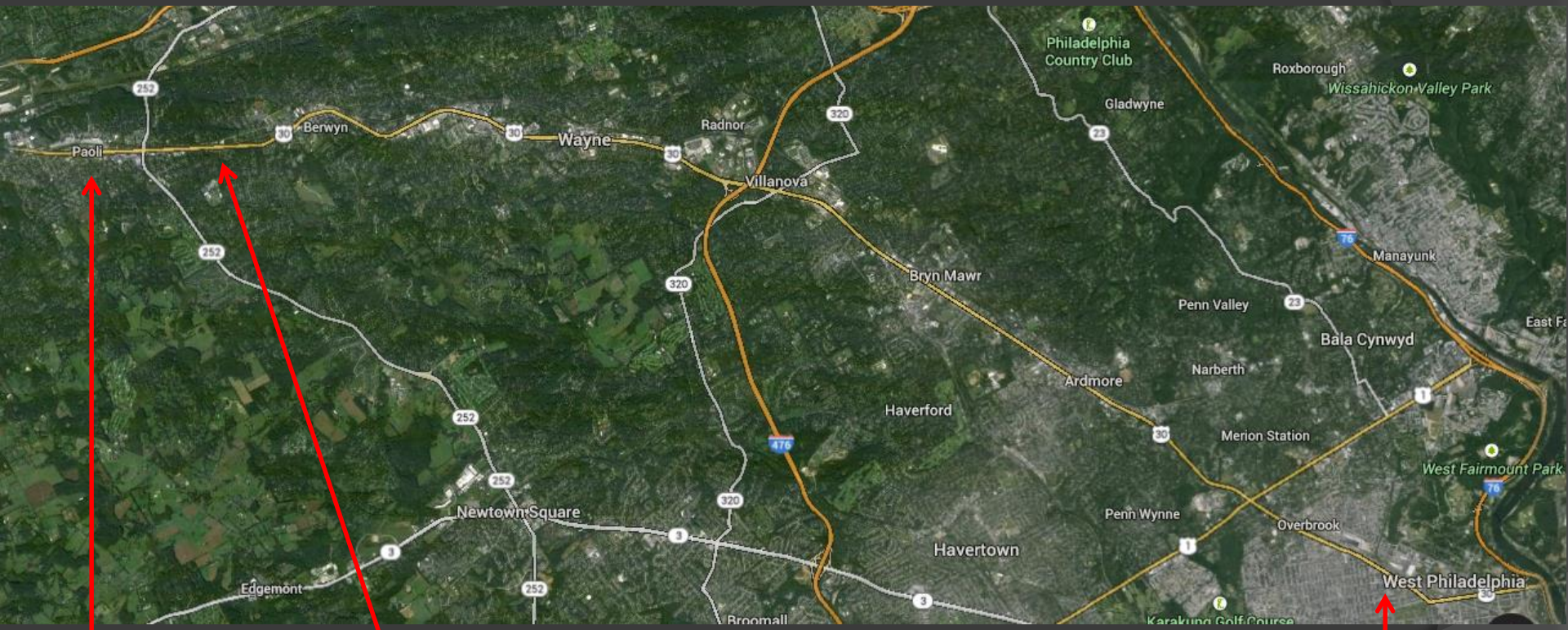
Paoli

Philadelphia

Philadelphia Main Line (Berwyn station)

Photograph by other

Daylesford



Daylesford

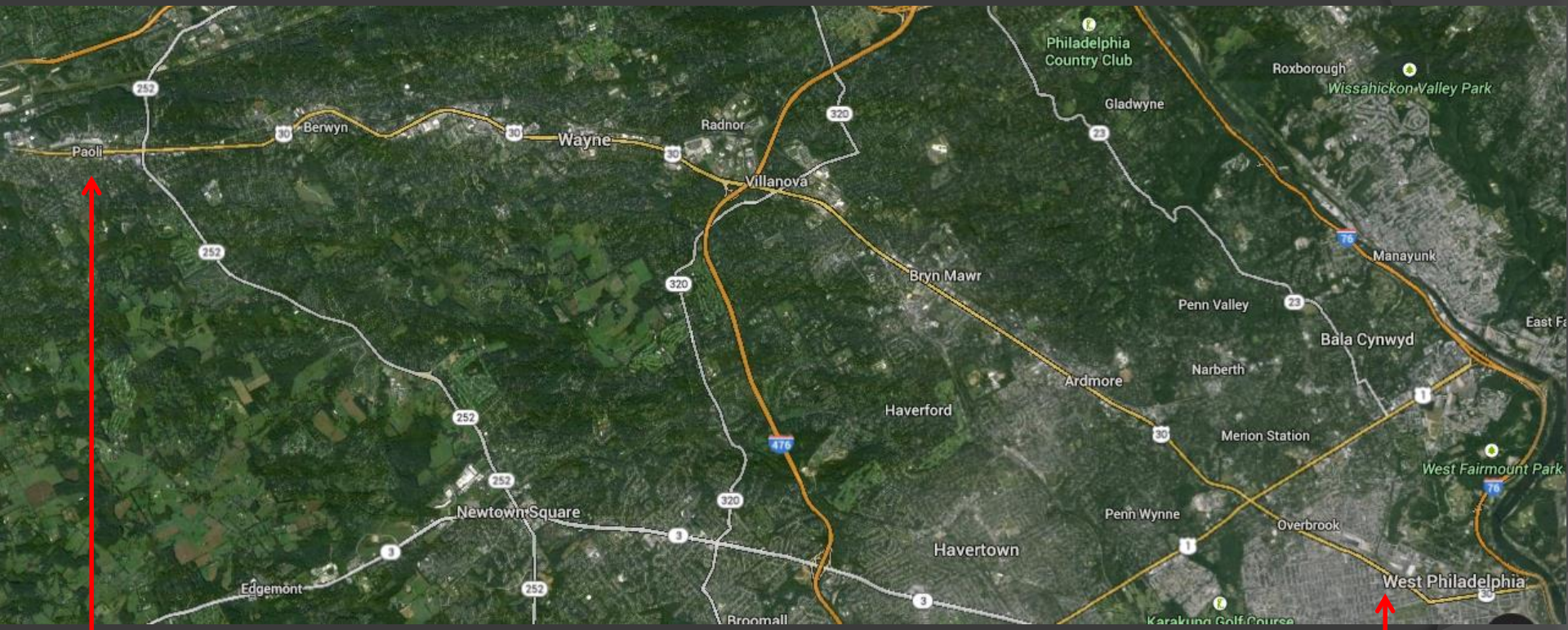
Paoli

Philadelphia

Philadelphia Main Line (Daylesford station)

Photographs by others

Paoli



Paoli

Philadelphia

Philadelphia Main Line (Paoli station)

Photograph by other

Upper Main Line YMCA in Paoli, PA

- Originally a Philadelphia “Main Line” estate of J. Gardner Cassatt in 1908
- Architect J. A. Dempwolf & Sons
- French Chateau style

Upper Main Line YMCA in Paoli, PA

Upper Main Line YMCA in Paoli, PA

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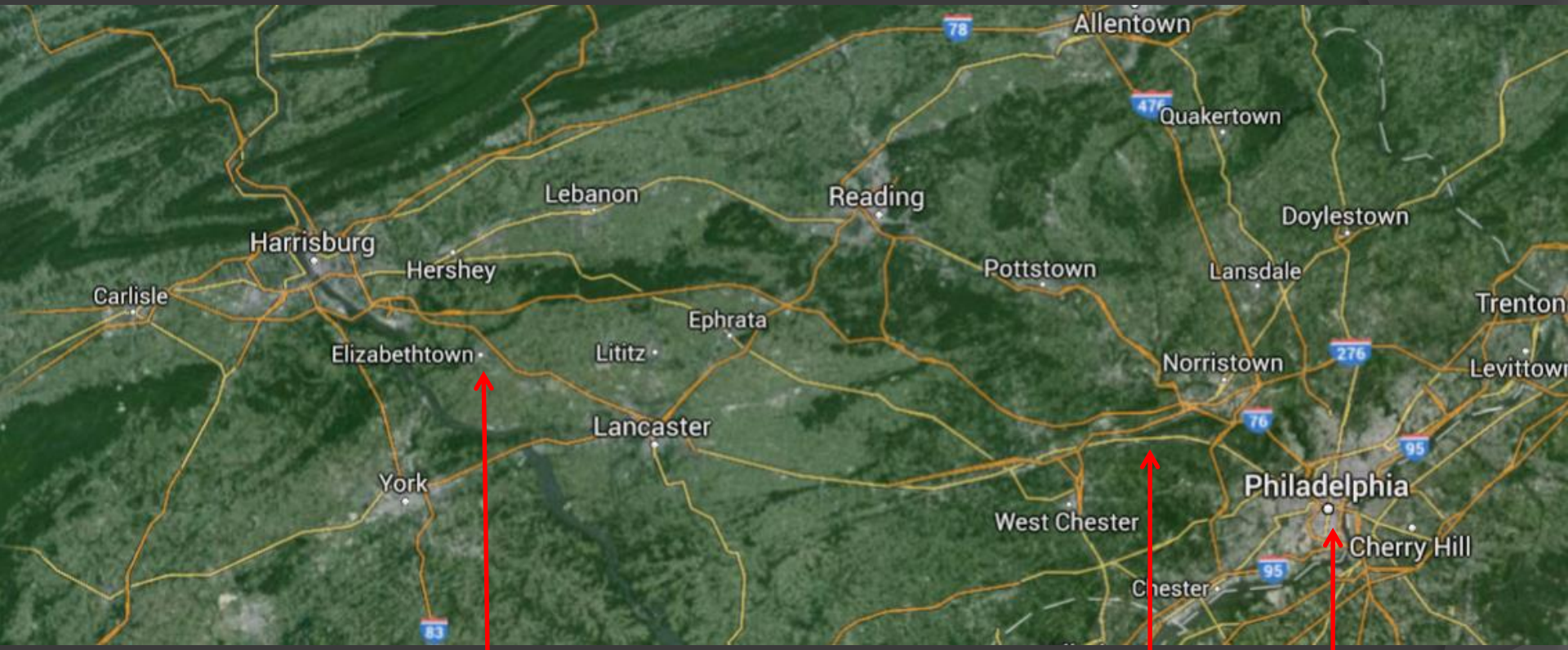
Upper Main Line YMCA in Paoli, PA

Upper Main Line YMCA in Paoli, PA

Philadelphia Main Line rails continue to Elizabethtown



Elizabethtown

Paoli

Philadelphia

Amtrak Elizabethtown Station

Photograph by other

Amtrak Elizabethtown Station

Photograph by other

- Be inspired by something grand
- Scale down to reality
  - But be loyal to style, quality, and details
- Conform to environment
  - Terrain, trees, climate, architectural vernacular

A Pennsylvania Country Home Design

A Pennsylvania Country Home Design

- Inspired by childhood on Philadelphia Main Line
- And trips to Europe

A Pennsylvania Country Home Design

Reminds me of this picture I took in St. Peters Cathedral in the Vatican in Rome after I had built this -→

A Pennsylvania Country Home Design

- Site before renovations

A Pennsylvania Country Home Design

- Modeling before renovations

A Pennsylvania Country Home Design

- Design choices
- A BIG DORMER

A Pennsylvania Country Home Design

- Design choices
- A LARGE ADDITION

A Pennsylvania Country Home Design

- Design choices
- A VERY LARGE ADDITION

THREE MAJOR DESIGN CHOICES

DESIGN CHOICE 1

HEAD-SPACE TOO CRAMPED

DESIGN CHOICE 2

DESIGN CHOICE 3

selected design

DESIGN CHOICE 3

A Pennsylvania Country Home Design

- VERY LARGE ADDITION chosen

JT Wunderlich 2002

Homeowner / Design-Builder

Southeastern Pennsylvania

2000sf remodel +1500sf new

Designed everything

5000+ man hours of construction

Plus two weeks of labor from father-in-law and a favorite student

Plus plenty of help from my son Joseph, and painting by my daughter Anna and wife Karla

Only contract was roof shingles and concrete mix truck

No Employees

Before

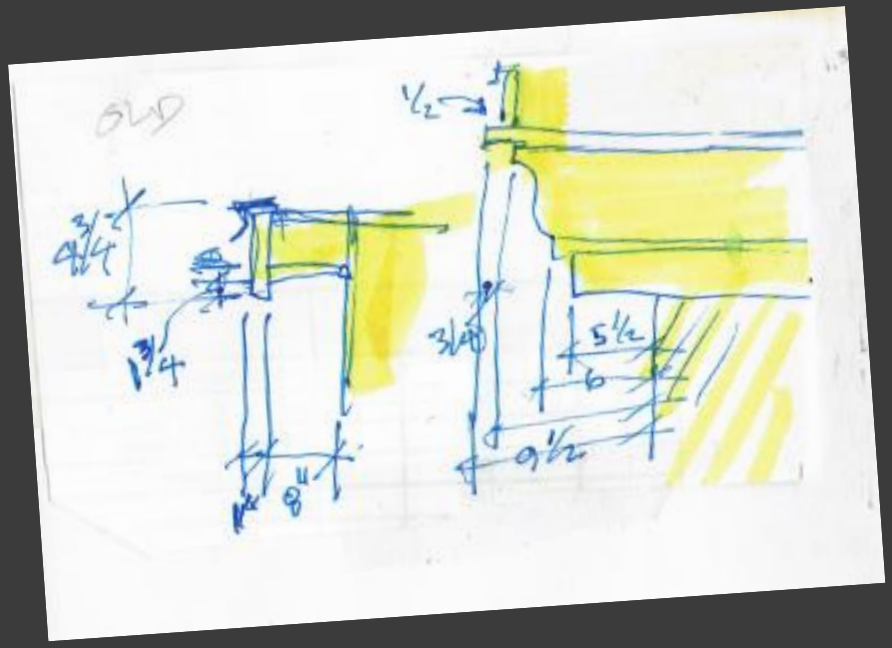
After

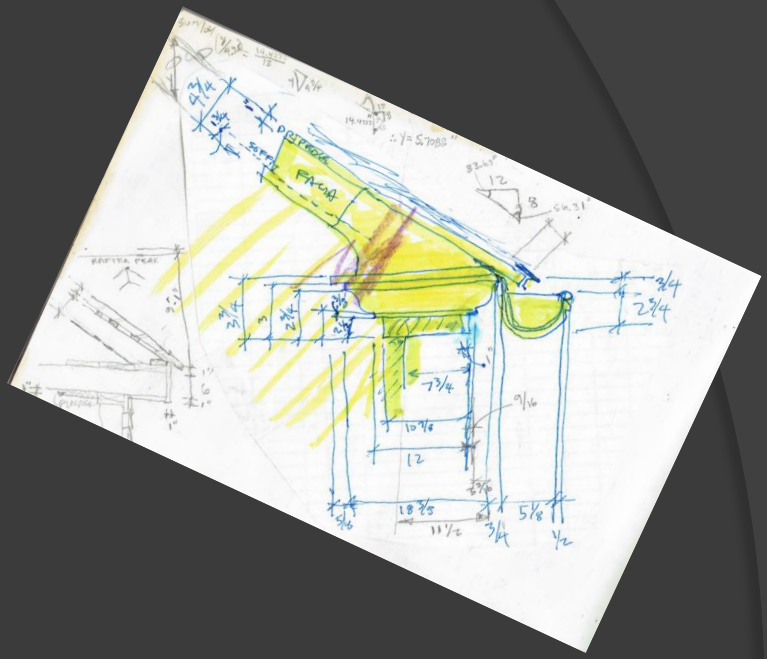
Before

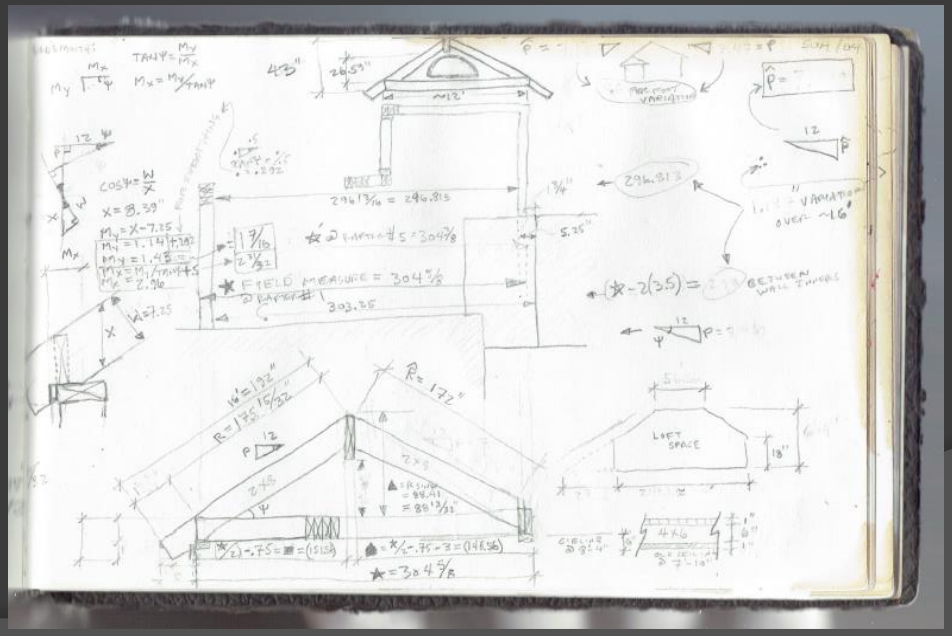
After

JT Wunderlich 2002

Homeowner / Design-Builder







A Pennsylvania Country Home Design
Buildings are also engineering projects

- Following the older traditional standard divisions:
  - Division 01 - GENERAL DATA
  - Division 02 - SITEWORK
  - Division 03 - CONCRETE
  - Division 04 - MASONRY
  - Division 05 - METALS
  - Division 06 - WOOD & PLASTICS
  - Division 07 - THERMAL & MOISTURE PROTECTION
  - Division 08 - DOORS & WINDOWS
  - Division 09 - FINISHES
  - Division 10 - SPECIALTIES
  - Division 11 - EQUIPMENT
  - Division 12 - FURNISHINGS
  - Division 13 - SPECIAL CONSTRUCTION
  - Division 14 - CONVEYING SYSTEMS
  - Division 15 - MECHANICAL
  - Division 16 – ELECTRICAL

- And Building Codes dictated all computations

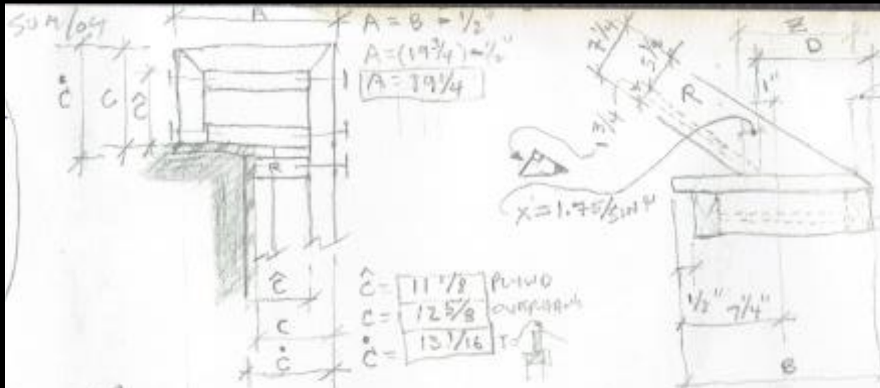

D

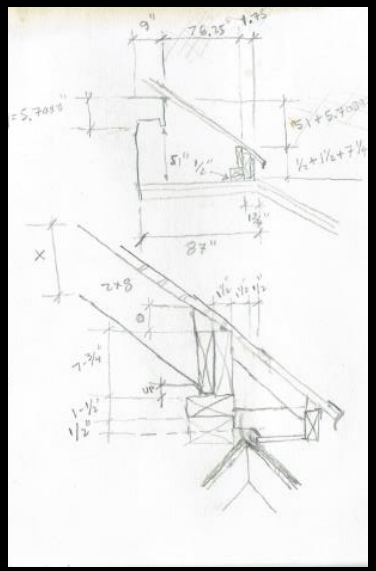
FRAME VISTA'S

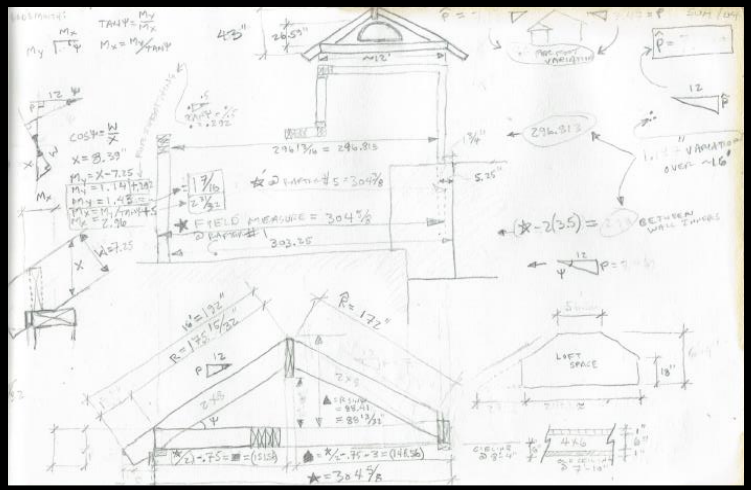
FRAME VISTA'S

FRAME VISTA'S

FRAME VISTA'S


A = B − 1/2
PLYWD
OVERHANG


9"
76.75"
1.75
87"


FIELD MEASURE = 304 5/8
LOFT SPACE


WELCOME

(2012 LEED reflection)

LEED-NC v3.0 (2009) Preliminary Project Checklist

"WUNDERealm EAST" *(J. Wunderlich Residence/Farmette, possible future Bed & Breakfast)*
Near Elizabethtown College, Pennsylvania

18-Oct-12
Preliminary Review Only - Subject to Change

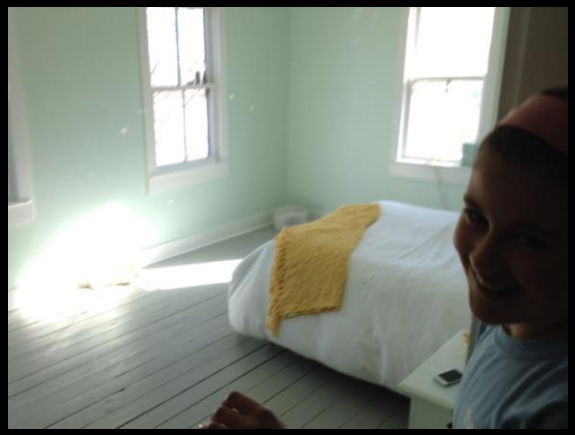
Yes	?	No				
11			**Sustainable Sites**	**28 Points**		
Y			Prereq 1	**Construction Activity Pollution Prevention**	Required	
1			Credit 1	**Site Selection**	1	UNOBSTRUCTED SOUTHERN EXPOSURE,SHIELDED NORTHRN, AA VIEWS
5			Credit 2	**Development Density & Community Connectivity**	5	COMPLIMENTS/PRESERVES FARM COMMUNITY ESTHETIC AND CULTURE
		N	Credit 3	**Brownfield Redevelopment**	1	not applicable, BUT RESTORATION OF 150-YEAR OLD STRUCTURES
		N	Credit 4.1	**Alternative Transportation**, Public Transportation Access	1	not applicable IN FARMING COMMUNITY
1			Credit 4.2	**Alternative Transportation**, Bicycle Storage & Changing Rooms	1	BIKES FOR EVERY FAMILY MEMBER
		N	Credit 4.3	**Alternative Transportation**, Low-Emitting and Fuel-Efficient Vehicles	3	NOT YET -- PLANNING HYBRID VEHICLE PURCHASE
		N	Credit 4.4	**Alternative Transportation**, Parking Capacity	2	not applicable IN FARMING COMMUNITY
1			Credit 5.1	**Site Development**, Protect of Restore Habitat	1	212 TREES PLANTED, FENCED-IN WILDLIFE, BIRD SANCTUARY CREATED
1			Credit 5.2	**Site Development**, Maximize Open Space	1	EXTENSIVE -- 3-1/2 Acres
1			Credit 6.1	**Stormwater Design**, Quantity Control	1	FRENCH DRAINS AROUND NEW CONSTRUCTION
		N	Credit 6.2	**Stormwater Design**, Quality Control	1	GREY-WATER SYSTEM BEING CONSIDERED
		N	Credit 7.1	**Heat Island Effect**, Non-Roof	1	not applicable IN FARMING COMMUNITY
		N	Credit 7.2	**Heat Island Effect**, Roof	1	not applicable IN FARMING COMMUNITY
1			Credit 8	**Light Pollution Reduction**	1	RECYCLE ALL PLASTIC AND PAPER, DONATE CLOTHES, ETC. TO POOR
3			**Water Efficiency**	**10 Points**	**Notes**	
Y			Prereq 1	**Water Use Reduction**, 20% Reduction	Required	
1			Credit 1	**Water Efficient Landscaping**	2 to 4	MINIMAL IRRIGATION FOR TREES AND 3 TO 4 GARDENS PER YEAR
1			Credit 2	**Innovative Wastewater Technologies**	2	NEW DRAINFIELD
1			Credit 3	**Water Use Reduction**	2 to 4	LOW-PRESSURE WELL; DISHES: HAND-WASH + ENERGY-EFF DISHWSHR
7			**Energy & Atmosphere**	**35 Points**	**Notes**	
Y			Prereq 1	**Fundamental Commissioning of the Building Energy Systems**	Required	
Y			Prereq 2	**Minimum Energy Performance**	Required	
Y			Prereq 3	**Fundamental Refrigerant Management**	Required	
6			Credit 1	**Optimize Energy Performance**	1 to 19	OIL + ELECTRIC ZONES WITH ARTIFICIAL INTELLIGENCE COMING
1			Credit 2	**On-Site Renewable Energy**	1 to 7	ACTIVE SOLAR, GROUND WATER LOOP, & WIND BEING CONSIDERED
		N	Credit 3	**Enhanced Commissioning**	2	not yet
		N	Credit 4	**Enhanced Refrigerant Management**	2	not yet
		N	Credit 5	**Measurement & Verification**	3	not yet
		N	Credit 6	**Green Power**	2	not yet
11			**Materials & Resources**	**14 Points**	**Notes**	
Y			Prereq 1	**Storage & Collection of Recyclables**	Required	
3			Credit 1.1	**Building Reuse**, Maintain Existing Walls, Floors & Roof	1 to 3	EXTENSIVE -- PRESERVATION OF 95% OF EXISTING STRUCTURES
1			Credit 1.2	**Building Reuse**, Maintain 50% of Interior Non-Structural Elements	1	EXTENSIVE - 90% MAINTAINED
2			Credit 2	**Construction Waste Management**	1 to 2	EXTENSIVE -- PRECISE MATERIAL ESTIMATES, NO DUMPSTERS
2			Credit 3	**Materials Reuse**	1 to 2	EXTENSIVE -- ALL POST & BEAMS, AND SIDING, AND STONES
	?		Credit 4	**Recycled Content**	1 to 2	SOME, BUT UNCERTAIN PERCENTAGE
2			Credit 5	**Regional Materials**	1 to 2	55% LOCAL BUILDING SUPPLIER w/in 10 miles, REUSE OF WOOD & STONE
1			Credit 6	**Rapidly Renewable Materials**	1	90% WOOD CONSTRUCTION
	?		Credit 7	**Certified Wood**	1	POSSIBLY SOME -- NEED TO CHECK RECORDS
11			**Indoor Environmental Quality**	**15 Points**	**Notes**	
Y			Prereq 1	**Minimum IAQ Performance**	Required	
Y			Prereq 2	**Environmental Tobacco Smoke (ETS) Control**	Required	
		N	Credit 1	**Outdoor Air Delivery Monitoring**	1	
1			Credit 2	**Increased Ventilation**	1	ATTIC TEMP-CONTROLLED FANS, PLENUMS FOR OPTIMAL AIR-FLOW
1			Credit 3.1	**Construction IAQ Management Plan**, During Construction	1	MASKS,NEGTVE-PRESS CONTAINMENT, AND VENTILATION/FANS ALWAYS
1			Credit 3.2	**Construction IAQ Management Plan**, Before Occupancy	1	CONTAINMENT AND VENTILATION
1			Credit 4.1	**Low-Emitting Materials**, Adhesives & Sealants	1	WATER-BASED WHEN POSSIBLE
1			Credit 4.2	**Low-Emitting Materials**, Paints & Coatings	1	LOW-VOC'S (Volatile Organic Compounds), PAINTS WATER-BASED
1			Credit 4.3	**Low-Emitting Materials**, Flooring Systems	1	ALL-WOOD, MINIMAL VOC'S
	?		Credit 4.4	**Low-Emitting Materials**, Composite Wood & Agrifiber Products	1	ALWAYS ATTEMPTED MINIMAL VOC'S -- NEED TO CHECK RECORDS
1			Credit 5	**Indoor Chemical & Pollutant Source Control**	1	RADON TESTED, CO2 MONITORED, INCREASED VENTILATION
		N	Credit 6.1	**Controllability of Systems**, Lighting	1	NOT YET, BUT DAILY FAMILY LIGHTING-MINIMIZATION PLAN
1			Credit 6.2	**Controllability of Systems**, Thermal Comfort	1	SEVERAL PROGRAMMED ZONES (ARTIFICIAL INTELLIGENCE PLANNED)
1			Credit 7.1	**Thermal Comfort**, Design	1	PROGRAMMED ZONES, DEHUMIDIFICATION
		N	Credit 7.2	**Thermal Comfort**, Verification	1	NOT YET
1			Credit 8.1	**Daylight & Views**, Daylight 75% of Spaces	1	EXTENSIVELY OPTIMIZED
1			Credit 8.2	**Daylight & Views**, Views for 90% of Spaces	1	EXTENSIVELY OPTIMIZED
5			**Innovation & Design Process**	**6 Points**	**Notes**	
1			Credit 1.1	**Innovation in Design**: Provide Specific Title	1	EXTRA INSULATION,Vapor & Moisture BARRIERS,Northern BUFFER SPACES
1			Credit 1.2	**Innovation in Design**: Provide Specific Title	1	OVERALL BUILDING HAS LOW SURFACE-AREA TO VOLUME RATIO
1			Credit 1.3	**Innovation in Design**: Provide Specific Title	1	STRUCTURAL REINFORCING OF OLD HOUSE WITH NEW FOUNDATIONS
1			Credit 1.4	**Innovation in Design**: Provide Specific Title	1	99% CONSTRUC BY OWNER W/ HAND-TOOLS, TO YARDS DIRT W/SHOVEL
1			Credit 1.5	**Innovation in Design**: Provide Specific Title	1	212 NEW TREES, PASSIVE-SOLAR, WINDBLOCK, NOISE-CONTROL /BIRDS
		N	Credit 2	**LEED® Accredited Professional**	1	OWNER PREPARING TO TAKE LEED GA EXAM
2			**Regional Priority**	**4 Points**	**Notes**	
1			Credit 1.1	**Regional Priority**: Provide Specific Title	1	PRESERVING EXISTING FARMHOUSES AND BARNS
1			Credit 1.2	**Regional Priority**: Provide Specific Title	1	3 TO 4 WORKING GARDENS PER YEAR -- AGRICULTURAL ZONING
			Credit 1.3	**Regional Priority**: Provide Specific Title	1	
			Credit 1.4	**Regional Priority**: Provide Specific Title	1	
60			**Project Totals** (pre-certification estimates)		**110 Points**	**ADD 16 POINTS WHEN SOLAR, WIND, & AI ZONES DONE**

Yes ? No

Certified 40-49 points Silver 50-59 points Gold 60-79 points Platinum 80-110 points

JT Wunderlich 2002

Southeastern Pennsylvania

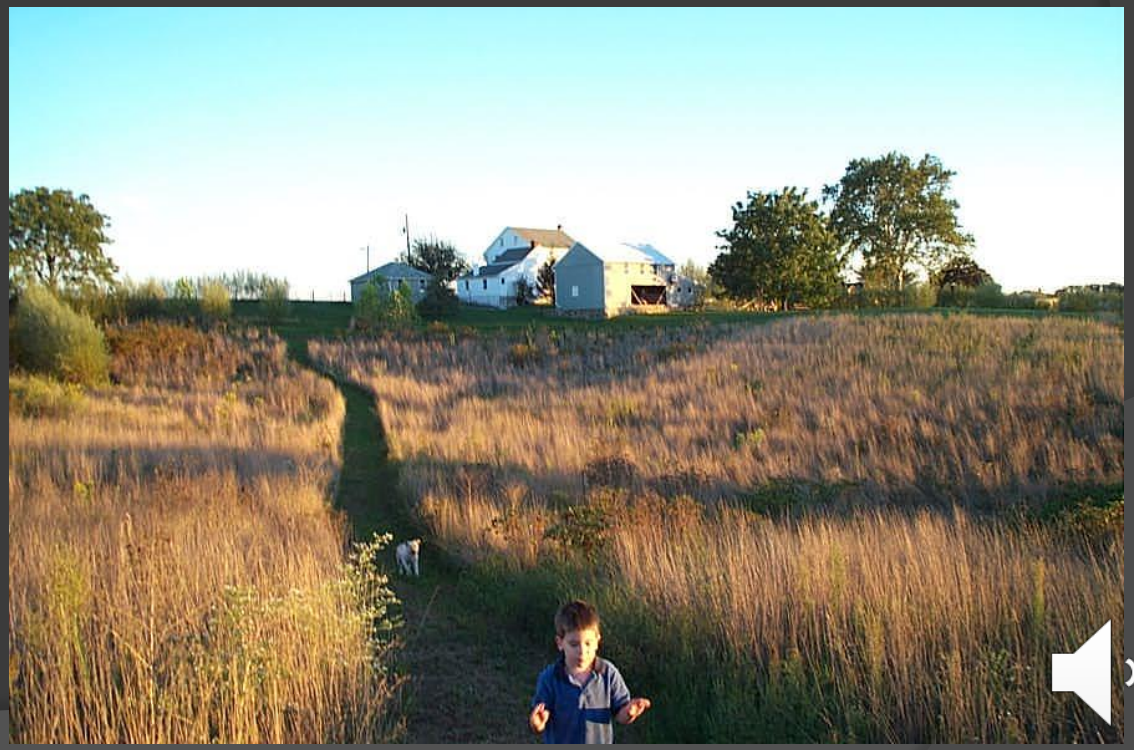



JT Wunderlich

JT Wunderlich 2002

Southeastern Pennsylvania

2000sf remodel +1500sf new



JT Wunderlich PhD

See more in [Wunderlich Architecture and Urban Design]