Mansions

*and their influence on more modest architecture*

*All photographs by J. Wunderlich unless noted otherwise*
Agenda

- Mansion & castle examples
  - Reference:

- Local mansion examples
  - Mansion-inspired designs

- One personal design
  - Mansion-inspired
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 (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

ITALY

Roman atrium house

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

Palladian Villa Rotunda, Vicenza

ITALY

Palladian Villa Rotunda, Vicenza

Image from: http://www.airpano.ru/files/neuschwanstein_11_big.jpg
ITALY
Palladian Villa Rotunda, Vicenza

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

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
Monticello, Charlottesville Virginia, 1770 AD
Thomas Jefferson’s Home

USA

Monticello, Thomas Jefferson’s Home

Image from http://www.monticello.org/sites/default/files/uploaded-content-images/monticello_west_earlspring.jpg
Monticello, Thomas Jefferson’s Home

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

Monticello, Thomas Jefferson’s Home
Local (regional) Mansion Examples

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

OVERBROOK TO PAOLI

Photograph by other
Philadelphia Main Line rails continue to Elizabethtown
Merion

Philadelphia

Merion

Paoli

Philadelphia
Philadelphia Main Line (Merion station)

Photograph by other
Ardmore
Philadelphia Main Line (Ardmore station)
Haverford

- Mansion repurposed as retirement housing
  “The Quadrangle”
Haverford
Bryn Mawr
Philadelphia Main Line (Bryn Mawr station)
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

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
Philadelphia Main Line (Rosemont station)
Rosemont

Rosemont College
Rosemont
Rosemont
Repurposed Mansion
Rosemont
Repurposed Mansion
Rosemont
Repurposed Mansion
Rosemont
Repurposed Mansion
Rosemont
Repurposed Mansion
Rosemont College
Rosemont

Rosemont College
Rosemont
Repurposed Mansion

Video: http://www.youtube.com/watch?v=UiKEc4VxAxA

Photograph by other
Philadelphia Main Line (Villanova station)

Photograph by other
Villanova University Chapel
Villanova: Academy-notre Dame De Namur
Repurposed Mansion
Villanova: Academy-notre Dame De Namur

Repurposed Mansion
Philadelphia Main Line (Radnor station)
St. Davids

Philadelphia

St. Davids

Paoli

Philadelphia
Philadelphia Main Line (St. Davids station)
Cabrini College mansion of original estate
Cabrini College
mansion of
original estate
Cabrini College mansion of original estate
Cabrini College in St. Davids, PA

- Originally a Philadelphia “Main Line” estate (“Woodcrest”) in 1907
- 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

HOUSE PLACED ON HIGH ELEVATION
Cabrini College
Cabrini College

TERRACED GARDEN
Cabrini College
Cabrini College
Cabrini College
Cabrini College

WALLED COURTYARD
Cabrini College

PORTICO
Cabrini College

ROOF GABLES
Cabrini College

DORMERS
Cabrini College

DORMERS
Cabrini College

PORCH
Cabrini College

ENCLOSED PORCH
ENCLOSED PORCH
Cabrini College

BANKS OF WINDOWS
Cabrini College

BANKS OF WINDOWS
Cabrini College

WINDOWS FOLLOWING STAIRS
Cabrini College
mansion of
original estate

Cabrini College
stables of
original estate

Cabrini College
gate house of
original estate
Cabrini College stables of original estate
Cabrini College

stables of original estate
Cabrini College

Cabrini College
stables of
original estate
Cabrini College mansion of original estate

Cabrini College stables of original estate

Cabrini College gate house of original estate
Cabrini College
gate house of
original estate
Cabrini College

gate house of original estate

MINI-MANSION
Nearby house resembling Cabrini College Mansion
Nearby house resembling Cabrini College Mansion
Eastern University

- Originally a Philadelphia “Main Line” estate (“Walmarthan”) in 1913
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

Paoli

Philadelphia
Philadelphia Main Line (Wayne station)
Strafford
Philadelphia Main Line (Strafford station)

1876
Victorian Era
Stick-Style

Added to the National Registry of Historic Places in 1984
Philadelphia Main Line (Devon station)
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
Philadelphia Main Line (Berwyn station)
Daylesford
Philadelphia Main Line (Daylesford station)

Photographs by others
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
Upper Main Line YMCA in Paoli, PA
Upper Main Line YMCA in Paoli, PA
Upper Main Line YMCA in Paoli, PA
Upper Main Line YMCA in Paoli, PA
Upper Main Line YMCA in Paoli, PA
Philadelphia Main Line rails continue to Elizabethtown
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
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
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
### LEED NC v3.0 (2009) Preliminary Project Checklist

**Project Information**
- **Project Name**: ProjectX
- **Location**: City, State
- **Project Manager**: John Doe
- **Architect**: Smith & Associates
- **General Contractor**: ABC Construction
- **Completion Date**: July 2023

**Project Scope**
- **Total Square Footage**: 100,000 sq ft
- **Construction Type**: Commercial
- **Program**: LEED Silver

### Sustainable Sites

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<tr>
<th>Credit</th>
<th>Description</th>
<th>Notes</th>
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<tr>
<td>NS-1</td>
<td>Site Sustainability</td>
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<tr>
<td>NS-2</td>
<td>Development Disruption</td>
<td>n/a</td>
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<td>NS-3</td>
<td>Stormwater Management</td>
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<td>NS-4</td>
<td>Water Quality and Quantity</td>
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<td>NS-5</td>
<td>Site Development, Existing Site</td>
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### Water Efficiency

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<td>WE-1</td>
<td>Water Efficient Landscaping</td>
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<tr>
<td>WE-2</td>
<td>Water Reuse Technologies</td>
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<tr>
<td>WE-3</td>
<td>Water Use Reduction</td>
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### Energy Performance

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<td>EP-1</td>
<td>Energy Performance</td>
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<tr>
<td>EP-2</td>
<td>Enhanced Commissioning</td>
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### Materials & Resources

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<td>MR-1</td>
<td>Resource Conservation</td>
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<tr>
<td>MR-2</td>
<td>Regional Materials</td>
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### Indoor Environmental Quality

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<td>IEQ-1</td>
<td>Indoor Air Quality</td>
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<tr>
<td>IEQ-2</td>
<td>Thermal Comfort</td>
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### Innovation & Design Process

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<td>Design Innovation</td>
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<tr>
<td>ID-2</td>
<td>LEED Accredited Professionals</td>
<td>in progress</td>
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### Leadership in Energy & Environmental Design (LEED)

- **Total LEED Points**: 131
- **Certification Level**: LEED Silver

---

(2012 LEED reflection)
JT Wunderlich 2002
Southeastern Pennsylvania
2000sf remodel +1500sf new