

Architects

Friday, February 23, 2018
7:42 PM

Architects

- 1) Thomas Jefferson - Founding Father of America, President of the United States and an Architect. Was inspired by Greek and Roman architecture. Known for his home Monticello and buildings at the University of Virginia.
- 2) Mies van der Rohe - Designed simplistic modern designs; 'less is more'. Known for such buildings as the Barcelona Pavilion and buildings at the Illinois Institute of Technology and the Chicago Federal Center.
- 3) Louis Sullivan - He would incorporate organic/plant ornamentation into his designs. Known for the Rookery Building (Chicago), Carson Pirie Scott Tower (Chicago), and the Farmers & Merchants Union Bank (Columbus, WI).
- 4) Frank Lloyd Wright - He worked as an apprentice for Louis Sullivan and worked on the Rookery Building. His early work was inspired by Louis Sullivan, but later he designed prairie style homes and then some more modern buildings. Known for the Robie House (Chicago), Falling Water (Pennsylvania), Johnson Wax Headquarters (Racine, WI), Solomon Guggenheim Museum (New York), Unitarian Meeting House (Madison, WI) and Taliesin (Spring Green, WI). The Monona Terrace is based on designed by Frank Lloyd Wright.
- 5) Frank Gehry - His buildings tend to be more about art than architecture. He is known for the Binoculars building (California), Fish pavilion (Barcelona), Guggenheim Museum (Bilbao) and the Weisman Art Museum (Minneapolis).
- 6) Cesar Pelli - Modern style buildings. Designed the Overture Center (Madison, WI), Petronas Towers (Kuala Lumpur) and the World Financial Center (New York).
- 7) Santiago Calatrava - He is a structural engineer and architect. He expresses the structural elements in his designs with organic forms and occasionally he includes moving parts. Examples of his buildings include the addition to the Milwaukee Art Museum, Transit Hub (New York) and several bridges.
- 8) Zaha Hadid - Used large curves and angles in her designs. She is known for Broad Art Museum (Lansing, MI), Guangzhou Opera House (China) and the London Aquatics Centre.

Architectural Style

Friday, February 23, 2018
7:41 PM

Architectural Style

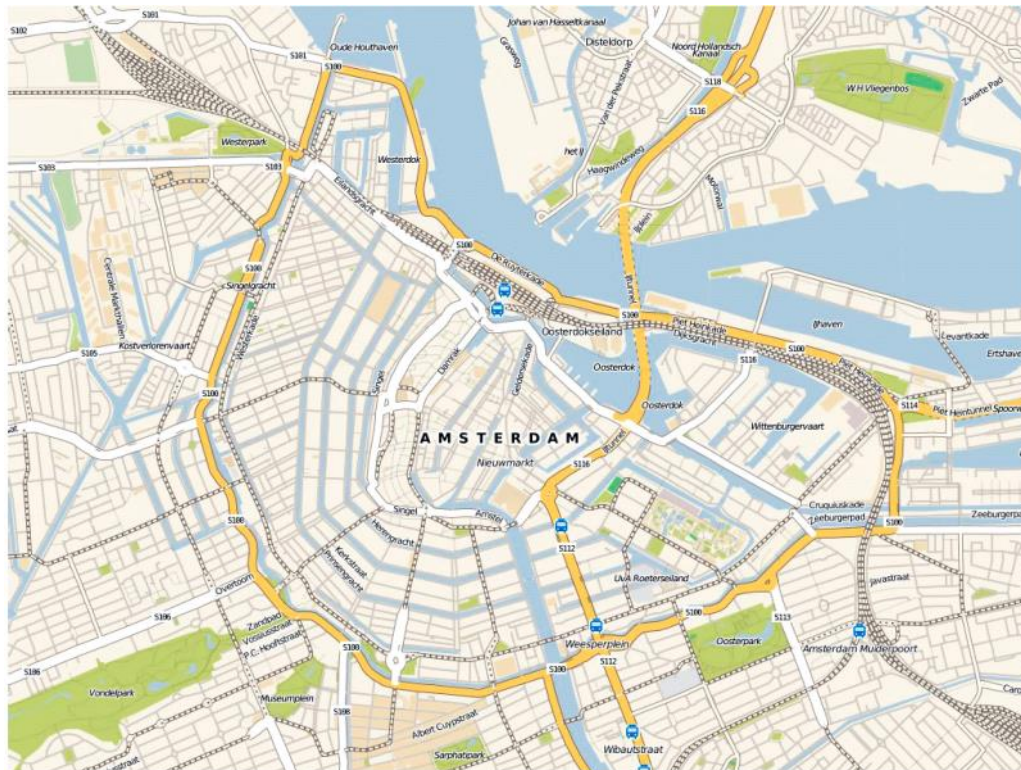
- 1) Classical - Uses principles of Greek and Roman buildings. Elements include pediments (triangle shape) and columns [tall cylinders with ornate tops (doric, ionic, corinthian). The Capitol Building in Madison is an example of classical architecture.
- 2) Gothic - Originally tall stone churches with large amounts of glass. Elements include pointed arches, ribbed vaults and flying buttress.
- 3) International - Buildings that were designed to be located anywhere as the designs did not relate to the elements around them. Elements include rectilinear forms, large amounts of glass, and lack of ornamentation.
- 4) Prairie Style - Architectural style developed to be unique to America and relate to the open prairies. Elements include low pitched roofs, deep overhangs, strong horizontal lines, ribbon windows, and prominent chimney.
- 5) Duck vs Shed - Buildings that relate to what they are used for or look unique to attract tourists
 - a. The Big Duck - building shaped like a duck that is used to see ducks and duck eggs
 - b. Longaberger basket building - office building that looks like a giant basket
 - c. National Freshwater Fishing Hall of Fame - Large fiberglass shaped muskie building
 - d. Glass Slipper shaped church in Taiwan
 - e. Binocular Building in Venice, CA

City Planning

Friday, February 23, 2018
5:24 PM

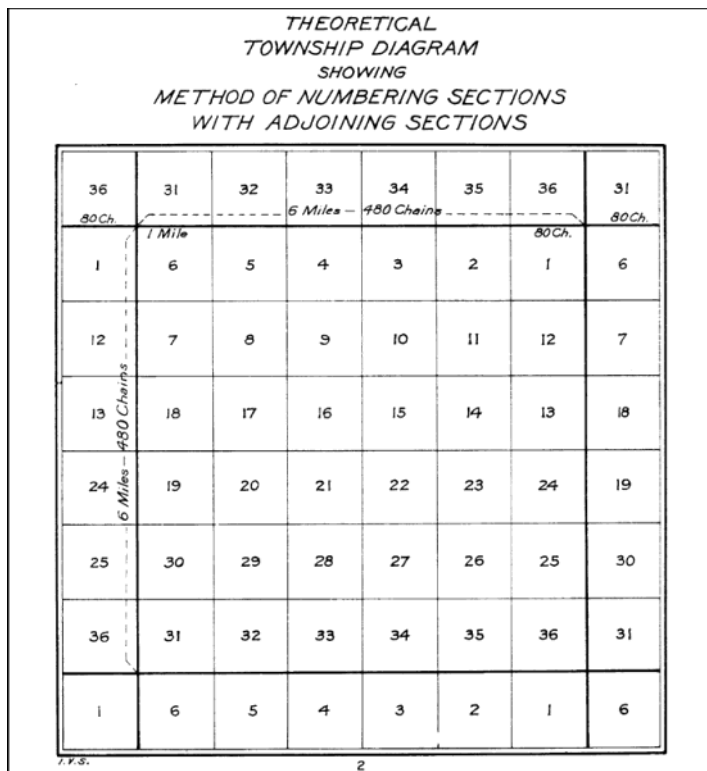
Types of City Layouts

- 1) **Defensive Walls** - The city of Amsterdam, Netherlands is located along a river and was originally designed with a wall and canal around the city to protect the people. As the city grew, new walls and canals were added. These walls and canal locations can still be seen today by looking at a map of Amsterdam.



Source: www.maps-of-europe.net

- 2) **Grid Streets** - The Land Ordinance of 1785 was adopted by the United States to establish a standardized system for dividing up land for settlers to purchase. Some of the numbered sections were reserved for government use such as number 16 which was intended for education.



- 3) Diagonal Streets - Paris, France has a series of diagonal streets which connect landmarks and important buildings. Some of the major diagonal streets were constructed around 1850 to 1870 when emperor Louis Napoleon III hired Georges-Eugene Hausmann to create wider streets connecting the landmarks to make it easier to move troops through the city to disrupt revolutions. The project also improved the sewer system, gas lighting, constructing landmarks, new parks, wider streets and a similar architectural style for Paris.
 - a. Source: <http://www.museumofthecity.org/project/hausmann-and-revival-of-paris/>
- 4) Examples:
 - a. Manhattan, New York is a city with gridded streets located on an island.
 - b. Chicago, Illinois is a city with gridded streets located on a lake.
 - c. Washington, DC is a city with diagonal streets inspired by the layout of Paris, France.
 - d. Milwaukee, WI is a city with gridded streets located on a lake. It is interesting to note that Milwaukee is comprised of different grids laid out by the founding fathers Solomon Juneau, Byron Kilbourn and George Walker. Solomon established Juneautown on the east side of the river with rectangular blocks while Byron established Kilbourntown on the west side of the river with square blocks that did not align with streets on the east side which is why many of the bridges are angled as they cross the river to connect the streets.
 - e. Madison, WI was laid out by James Duane Doty on an isthmus to become a capitol city. It is interesting to compare his original city plan with the city layout we have today. The capitol is located at the corner of four surveyed townships. Diagonal streets were added to the grid. The university and parks were identified.
 - f. DeForest and Sun Prairie, WI are both cities that were laid out with a main street for businesses and residential areas behind.
- 5) Other Interesting Cities:
 - a. Chaco Canyon is an old Native American city that contains two parts. One part is built on flat land with circular and square buildings built close together for defense. The second part was built on the side of a canyon.
 - b. Machu Picchu (thought to have been a vacation home for the ruling class) was built on a mountain side with terracing to create flat areas for buildings and gardens.

<http://www.complex.com/pop-culture/2013/03/the-15-most-iconic-city-grids-in-the-world/portland>

Community

Friday, February 23, 2018
5:19 PM

Community/City Needs

- 1) Places to live
 - a. House
 - b. Apartment
- 2) Places to work
 - a. Office
 - b. Factory
- 3) Places to buy items
 - a. Store
 - b. Restaurant
- 4) Places to play/ entertainment
 - a. Park
 - b. Movie Theatres
 - c. Bowling Alley
- 5) Places for public services
 - a. Post Office
 - b. Police Station
 - c. Fire Station
 - d. Hospital
- 6) Places of community activity and history
 - a. Library
 - b. Community Building
 - c. Historical Society
- 7) Places for transportation
 - a. Bus Station
 - b. Train Station
 - c. Airport

Energy

Friday, February 23, 2018
5:18 PM

Sources of Energy used to generate electricity and heat

- 1) Fossil Fuels - formed over a long period of time from the remains of living organisms
 - a. Coal - combustible sedimentary rock formed from dead plant matter
 - b. Petroleum (Oil) - composed of hydrocarbons and other organic materials it is refined to form other fuels
 - i. Gasoline
 - ii. Diesel
 - iii. Kerosene
 - c. Natural Gas - gas formed from layers of decomposing plant and animal matter are exposed to intense heat and pressure
- 2) Solar - sunlight
- 3) Wind - air movement
- 4) Hydro power - water movement (falling or running)
- 5) Nuclear - nuclear fission reactions used to generate heat to turn steam turbines to produce electricity
 - a. Fission - dividing or splitting into two parts. Relatively easy to control and therefore used to produce energy. Down side is the amount of radioactive waste produced.
 - b. Fusion - joining two or more things together. Less hazardous waste is produced, but it currently takes more energy to fuse atoms than the amount of energy that is released.
- 6) Biofuel - fuel produced from biological processes such as agriculture or anaerobic digestion (microorganisms breakdown biodegradable material)
 - a. Sources
 - i. Food crops
 - ii. Non-food plant material (grasses, seed crops, waste plant material, etc.)
 - iii. Algae
 - b. Types
 - i. Ethanol - derived from fermentation of sugars from wheat, corn, sugar beets, sugar cane, molasses, etc.
 - ii. Biodiesel - derived from oils or fats from animal fats, vegetable oils, soy, sunflower, etc.
- 7) Ocean or Marine current - naturally occurring ocean current (such as the Gulf stream) or the rising warm water at the equator
- 8) Geothermal - heat generated and stored in the earth
- 9) Tidal power - movement of water caused by gravitational pull of the moon

Landmark Buildings

Friday, February 23, 2018

7:42 PM

Landmark Buildings

- Capital: Madison
- City Hall: Milwaukee
- Calatrava Museum Addition: Milwaukee
- Sports Stadiums: Brewers, Bucks, Packers
- Eiffel Tower: Paris
- Willis Tower: Chicago
- John Hancock: Chicago
- Chrysler Building: New York
- Statue Of Liberty: New York
- Arch: St Louis
- Hoover Dam: Nevada

Websites

- designlike.com
- 100-most-famous landmarks
- landmarkunitedstates.com
- [travel channel destinations/us/photos/50-states-50-landmarks](http://travelchanneldestinations.us/photos/50-states-50-landmarks)
- 7 wonders geography.about.education

7 wonders of the ancient world

7 wonders of the modern world

Natural wonders vs man made

Landscape design

Saturday, February 24, 2018
8:44 AM

Landscape Design

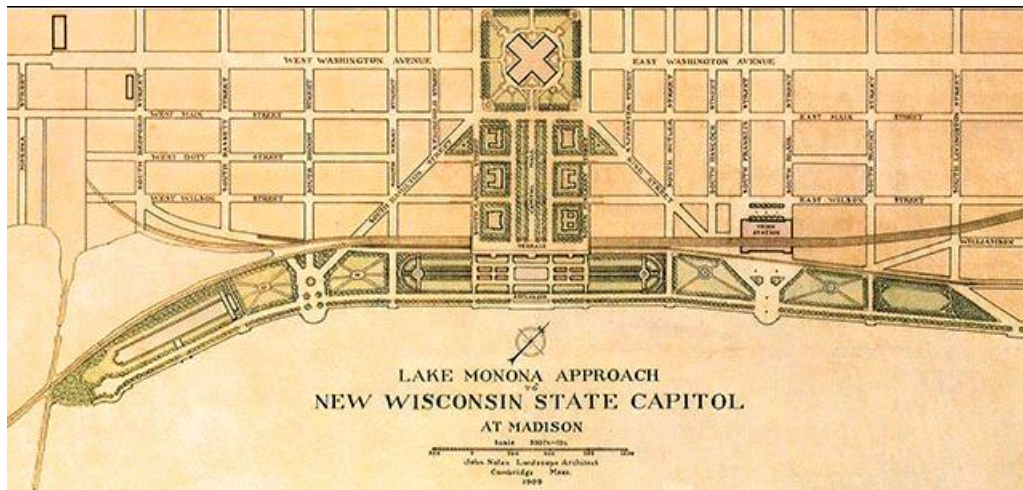
- 1) Manicured landscape vs Organic (Natural) landscape
 - a. Many European parks were manicured parks with symmetry, straight paths and trimmed bushes.
 - b. Later parks were designed to look natural with curving paths.
- 2) Allen Centennial Garden on the UW campus in Madison show cases various types of landscapes and gardens.
 - a. Victorian Garden
 - b. Great Lawn
 - c. Rock Garden
 - d. Pond Garden
 - e. Hillside Garden
 - f. Italian/French garden
 - g. Japanese Garden
 - h. Edible Garden
 - i. English Garden
 - j. Shade Garden
- 3) Frederick Law Olmstead - Considered to be the father of the American Landscape Architecture. He is known for the Central Park in New York City, Grand Necklace of Parks in Milwaukee, WI, and the Niagara Reservation in Niagara Falls, New York.

Madison City Planners/Landscape Designers

- 1) James Duane Doty - created the original plan of Madison. Note the elements that are still in existence today and others that were never built.



- 2) John Nolen - Developed a plan for the Monona Lake edge near downtown. This plan led to the development of the government buildings along Martin Luther King, Jr Boulevard.



- 3) Ladislav Segoe - Developed a plan for the Mendota Lake Edge from James Madison Park to Wisconsin Avenue.



Zoning

Friday, February 23, 2018
7:44 PM

Zoning - Separation of different use types based on their use and density by local municipalities. Uses are separated for safety and comfort for things like noise, smells and risk of fire.

1) Regulations

a. Types of Activities

- i. Industrial - manufacturing plants and storage
- ii. Residential - places where people live
- iii. Commercial - places for businesses where people work and shop such as offices, retail, hotels and restaurants
- iv. Agricultural - areas used for farming
- v. Transportation - areas used for streets or railroads
- vi. Institutional - public buildings such as schools, hospitals, government offices, churches,
- vii. Mixed residential-commercial - combination of places for people to live and places for businesses

b. Density - restricts the number of people or activities

- i. Heavy and light manufacturing
- ii. Single and multi family residential
- iii. Small and large retail

c. Height - restricts how tall the buildings are allowed to be

d. Size - restricts how large the footprint of the building can be

e. Open space - regulates how much open space must be maintained on the property

f. Location - set backs from the property line to control how far the building must be from the street or nearby buildings