

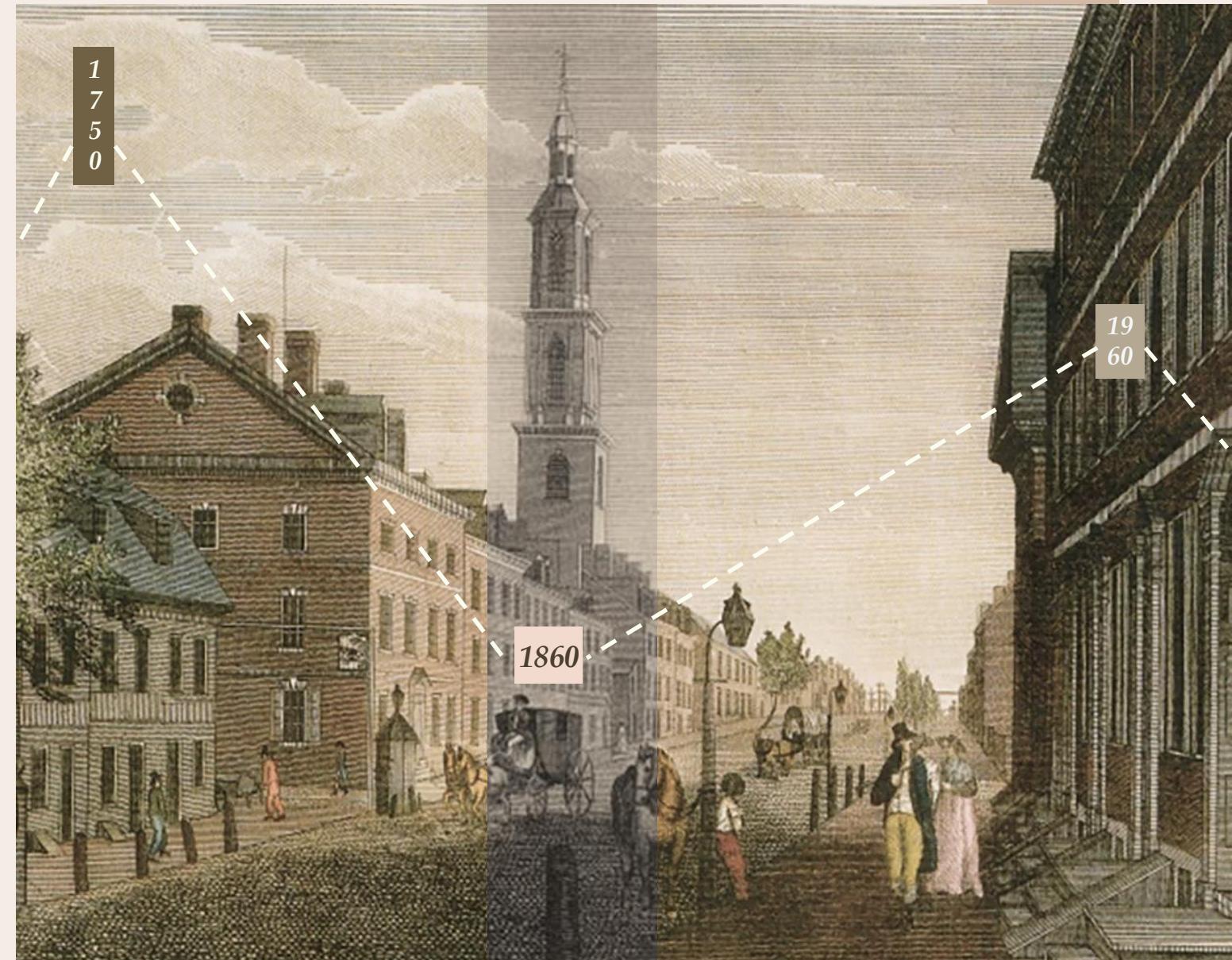
Philadelphia's Urban Landscape Evolution: 200 Years of Change

Emily Zhou ^a Jonathan Fogelson ^{ab}

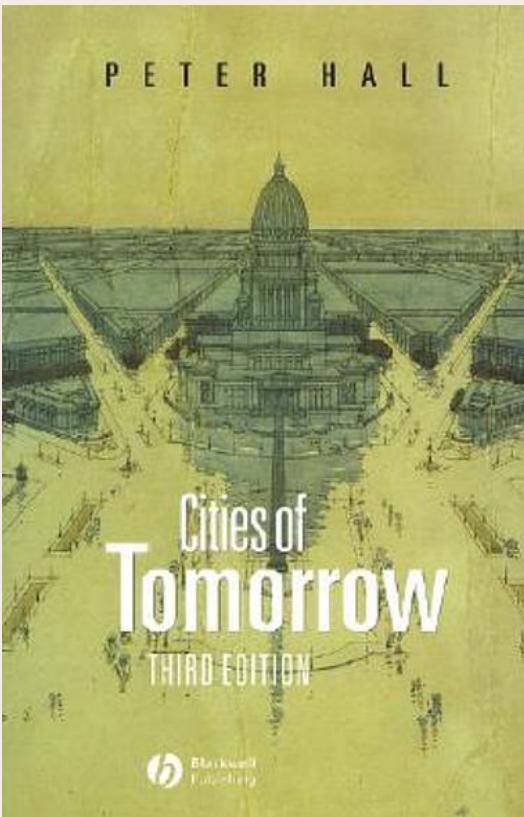
a. Department of City and Regional Planning

University of Pennsylvania Stuart Weitzman School of Design

b. Michael Singer Studio

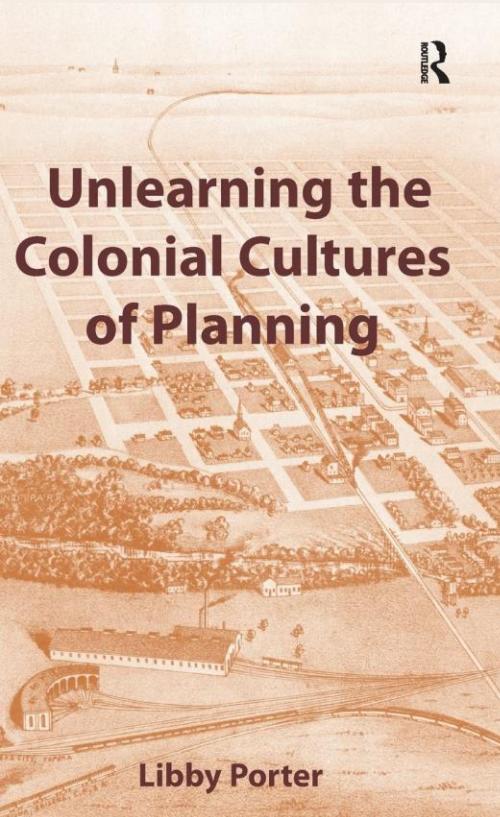


Background

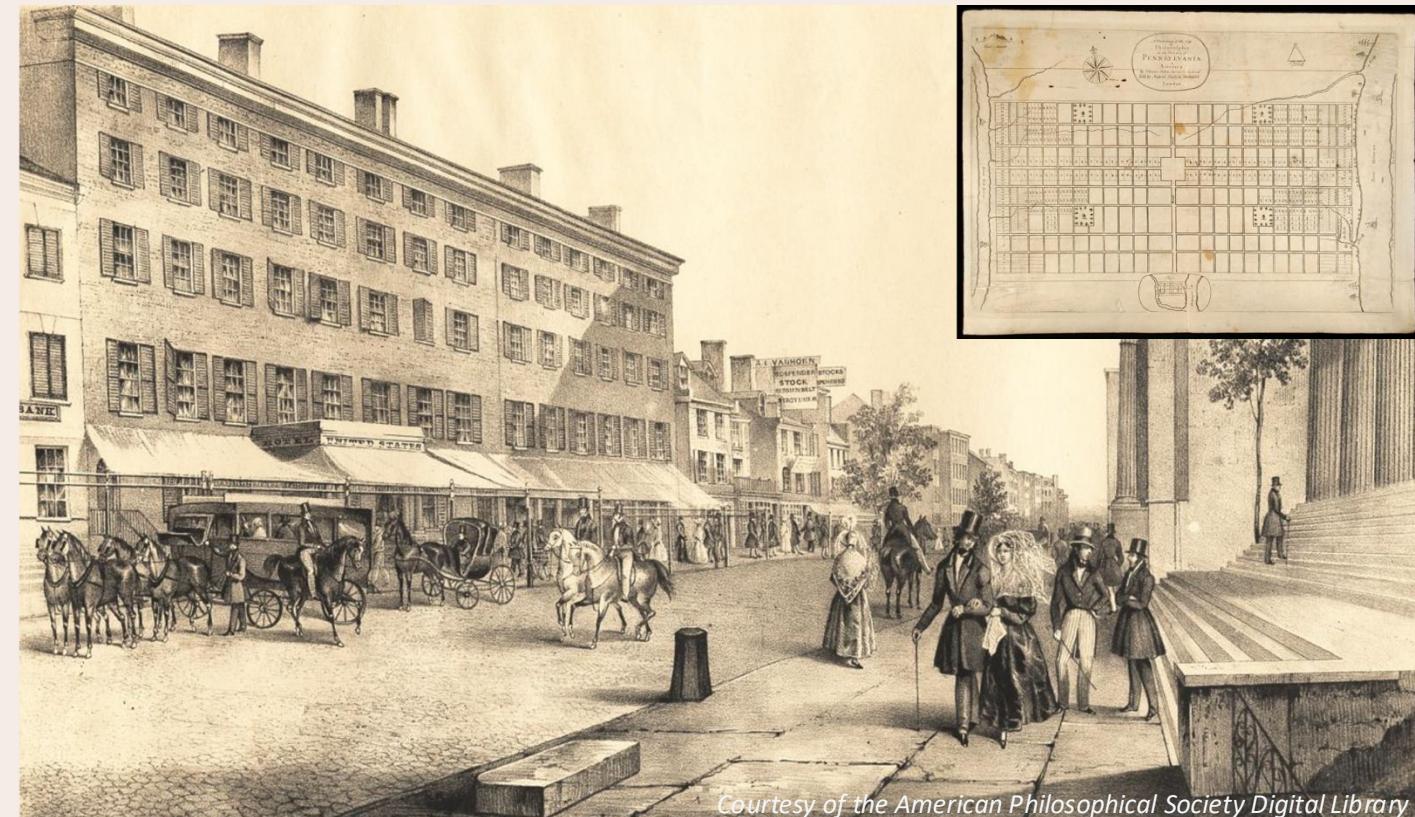


Planning History and Theory

1. Historical Significance



2. Artistic Value



Urban Design

3. Cartographic Evolution

Map Collections

1750s - 1770s

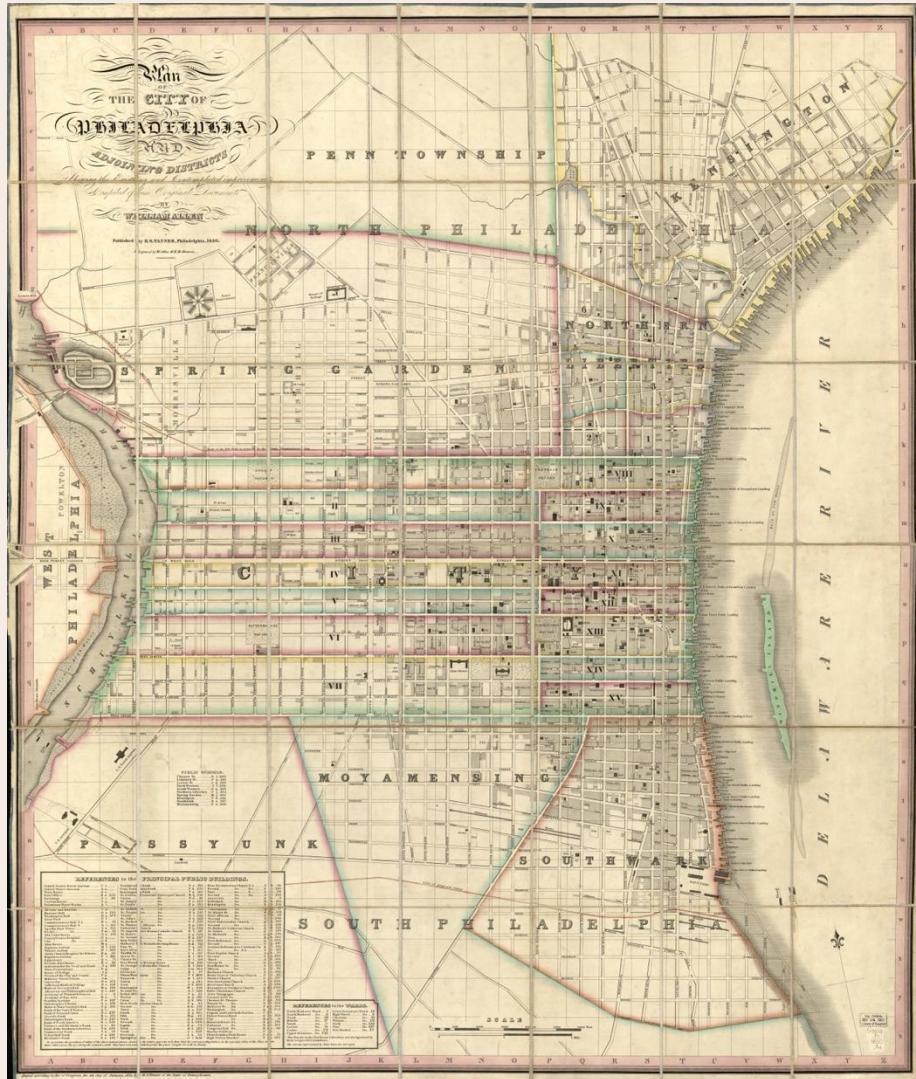


A Map of Philadelphia and Parts Adjacent (1750).

By Nicolas Scull, George Heap [Courtesy of the Library of Congress]

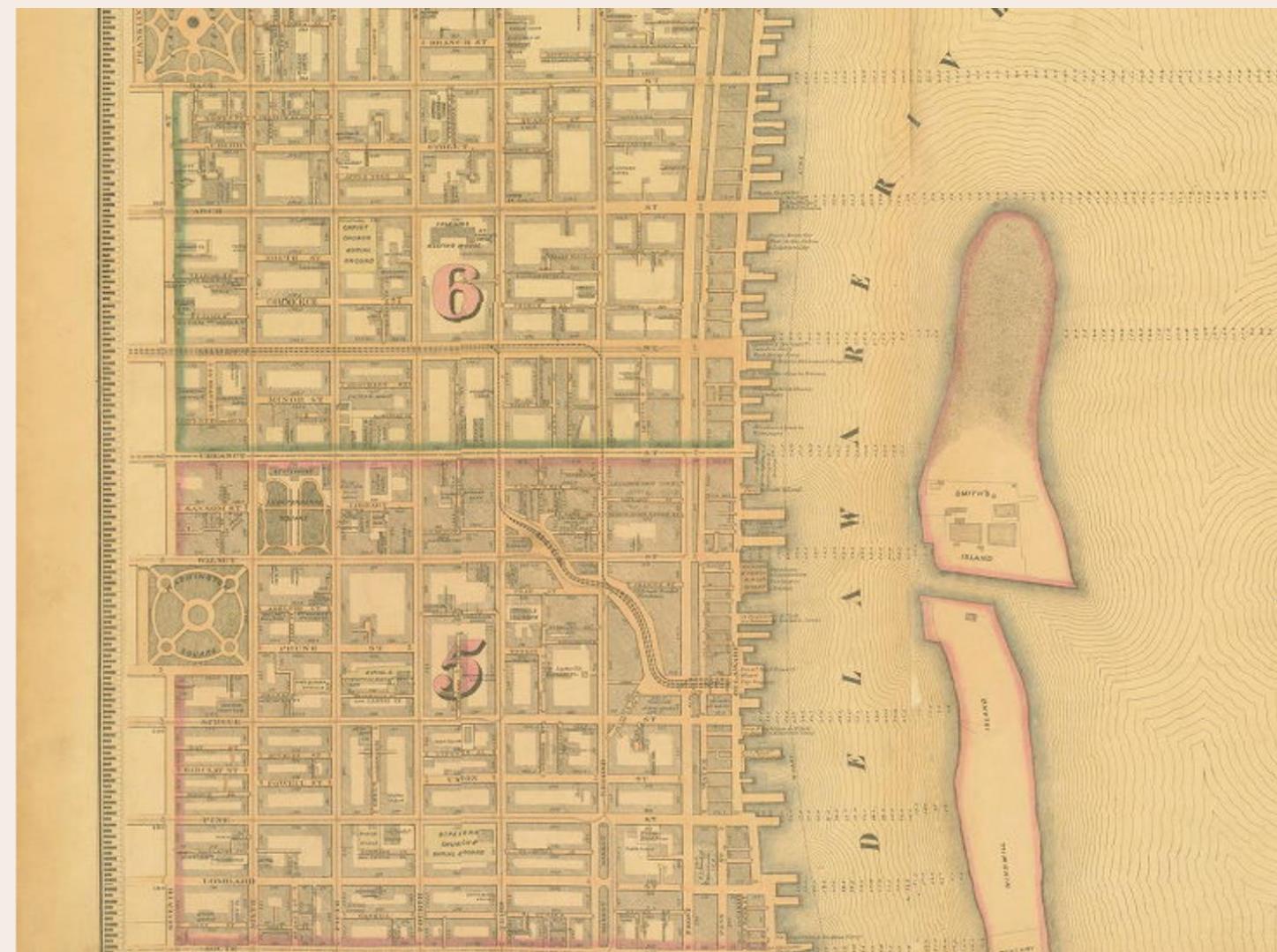


Map Collections



Plan of Philadelphia and Adjoining Districts (1830)

By William Allen, Henry S. Tanner [Courtesy of the Library of Congress]



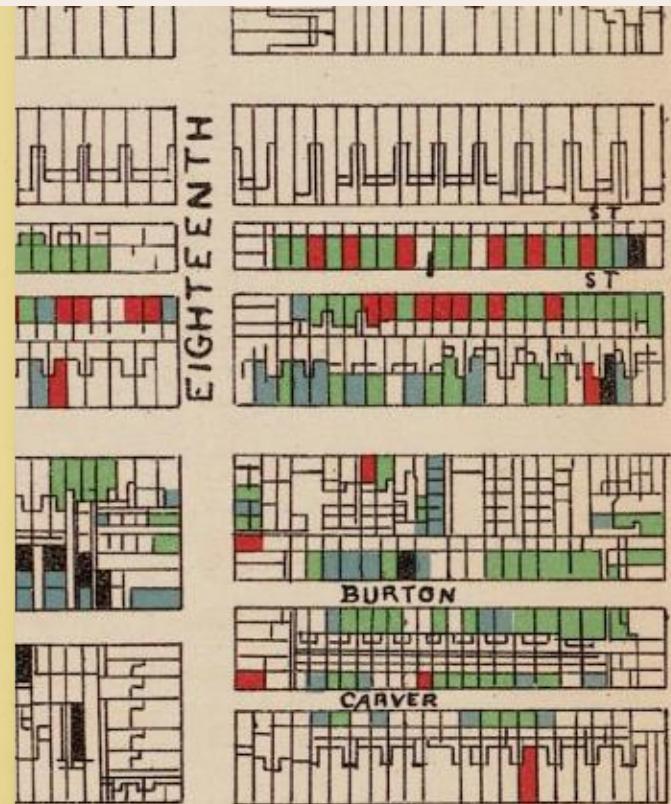
Smedley's Atlas of the City of Philadelphia (1862) Section 5

By Samuel Lightfoot Smedley [Courtesy of the Free Library of Philadelphia]

Map Collections

1870s - 1900s

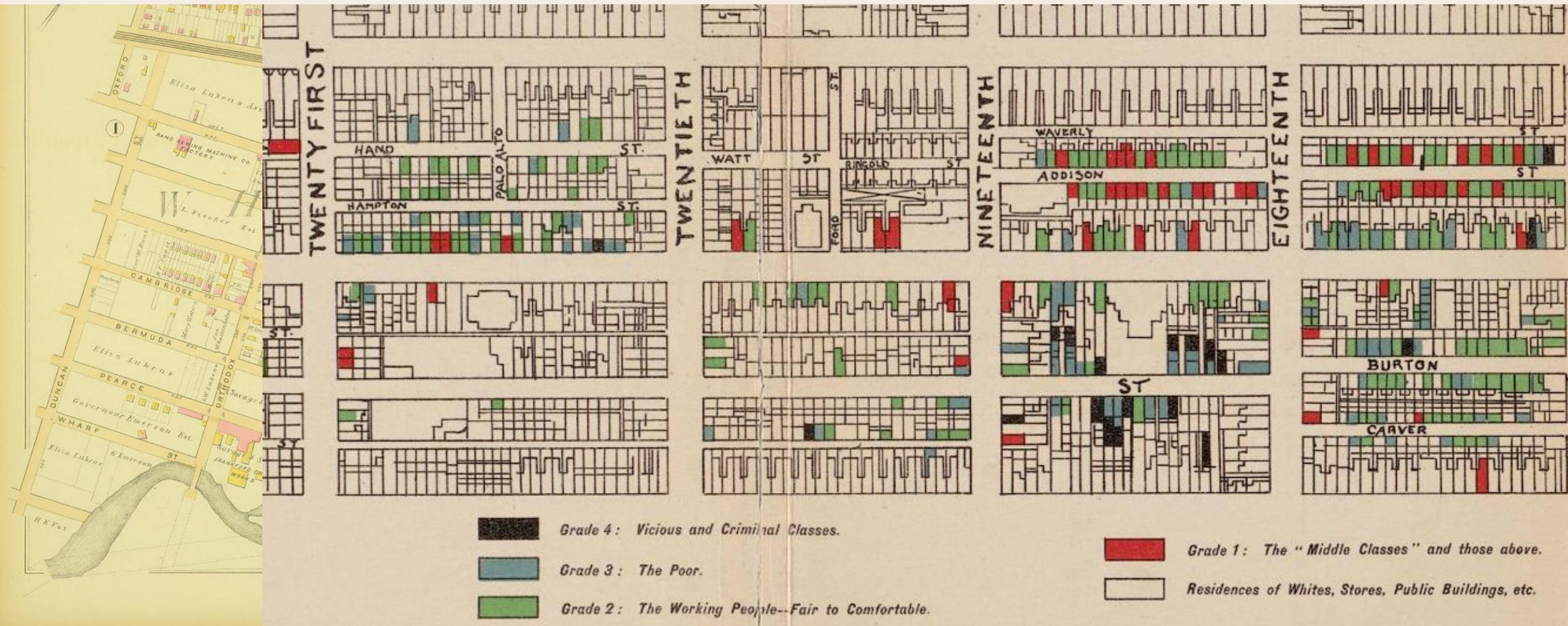
47.2529°N 122.4443°W



Grade 1: The "Middle Classes" and those above.

Residences of Whites, Stores, Public Buildings, etc.

Map Collections

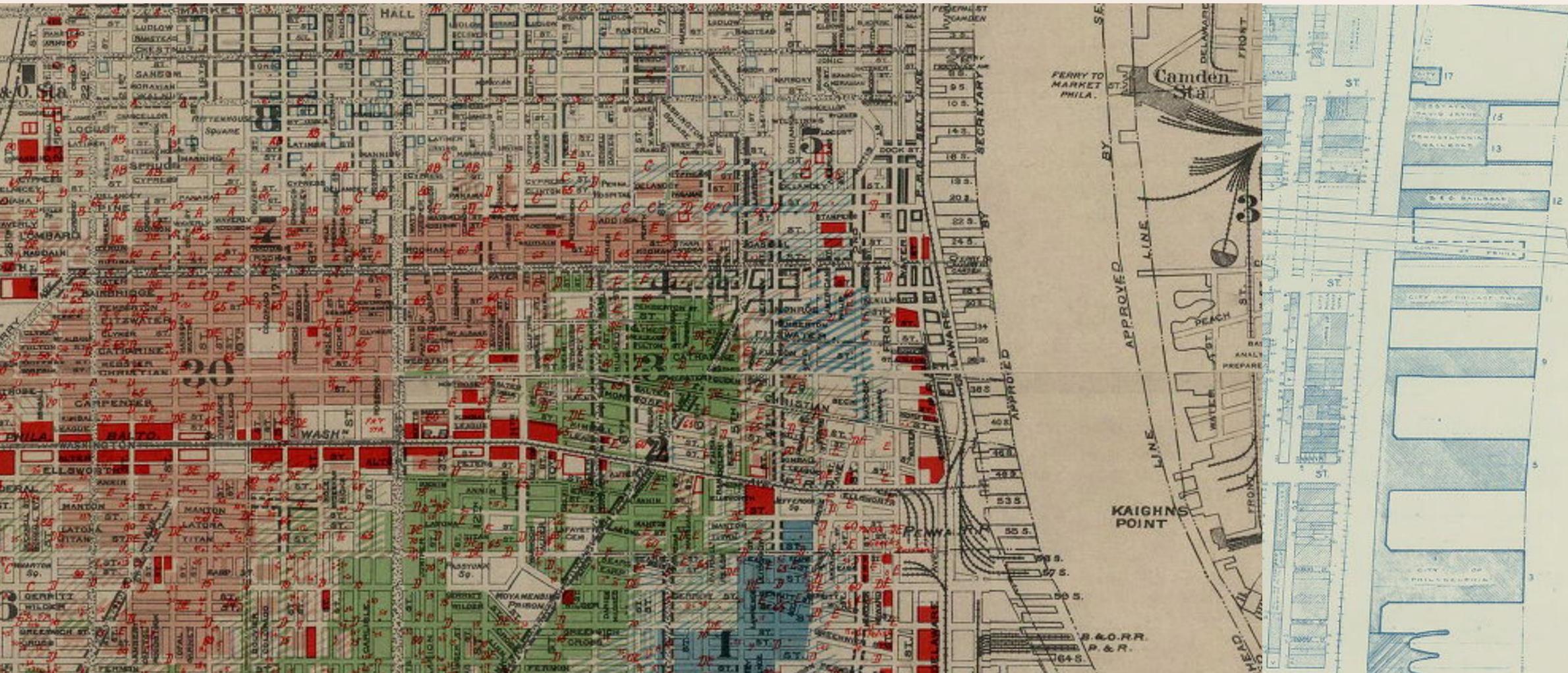


The Seventh Ward of Philadelphia: the distribution of Negro inhabitants throughout the ward, and their social conditions (1899)

By W.E.B Du Bois [Courtesy of Boston Public Library]

Map Collections

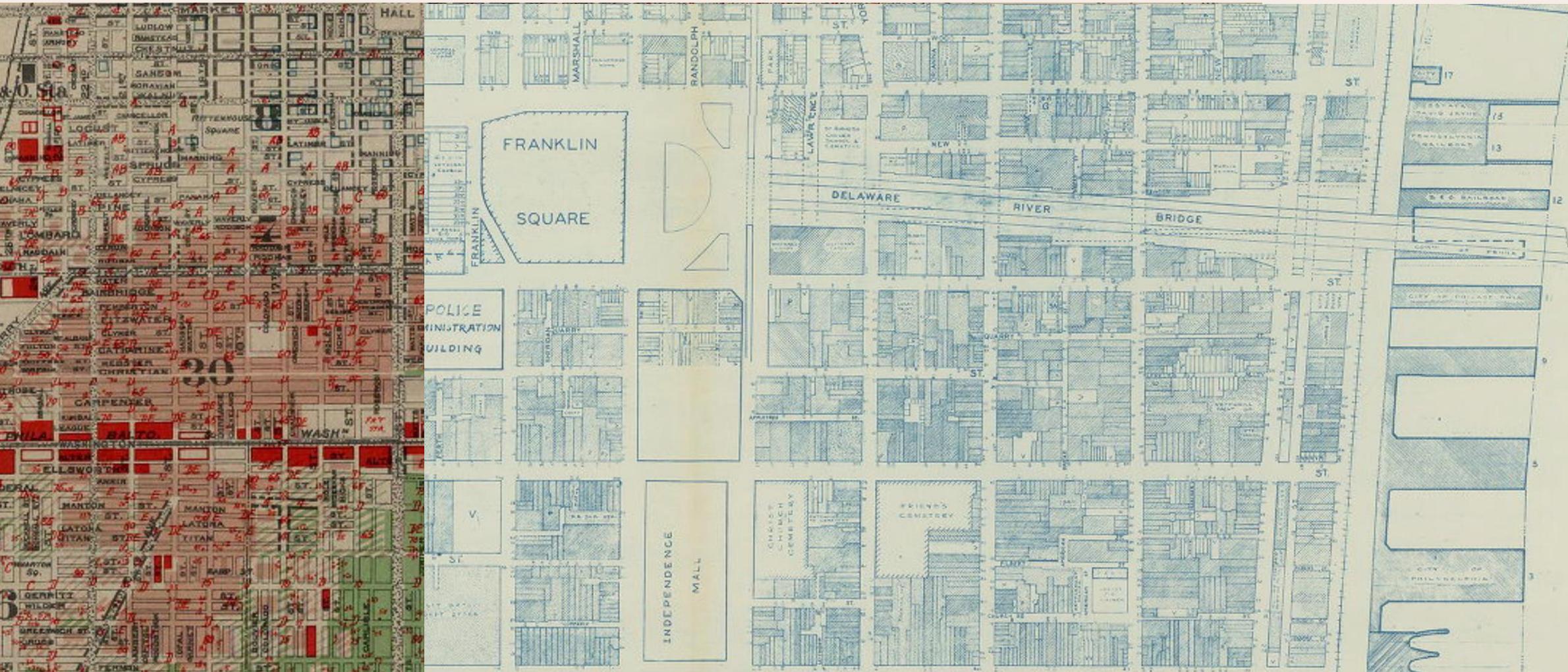
1900s - 1960s



J. M. Brewer's Map of Philadelphia (1934) South Section

By J. M. Brewer [Courtesy of the Free Library of Philadelphia]

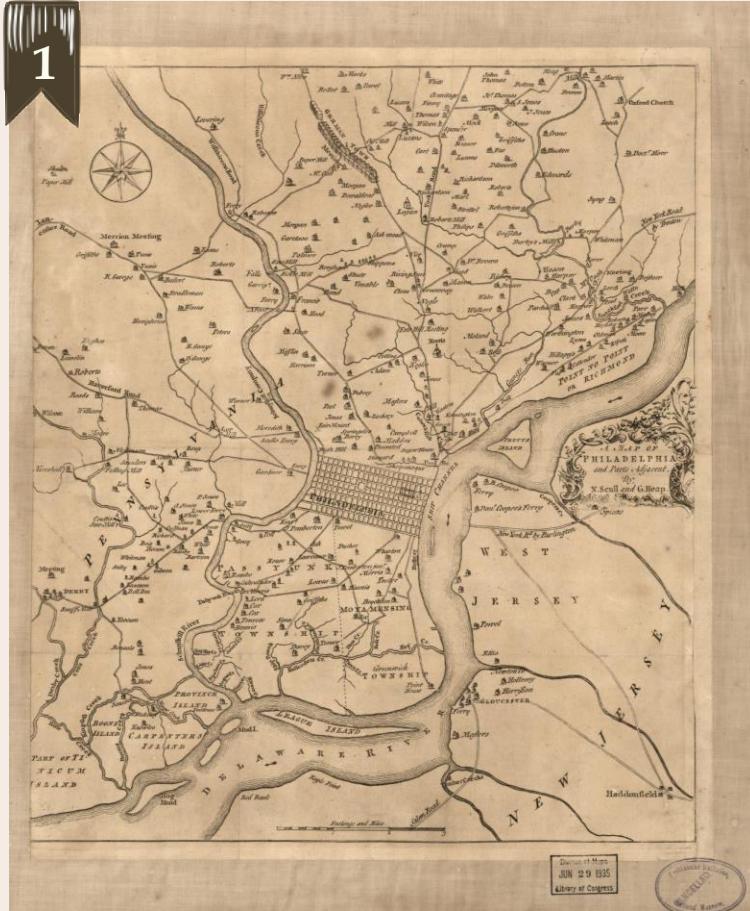
Map Collections



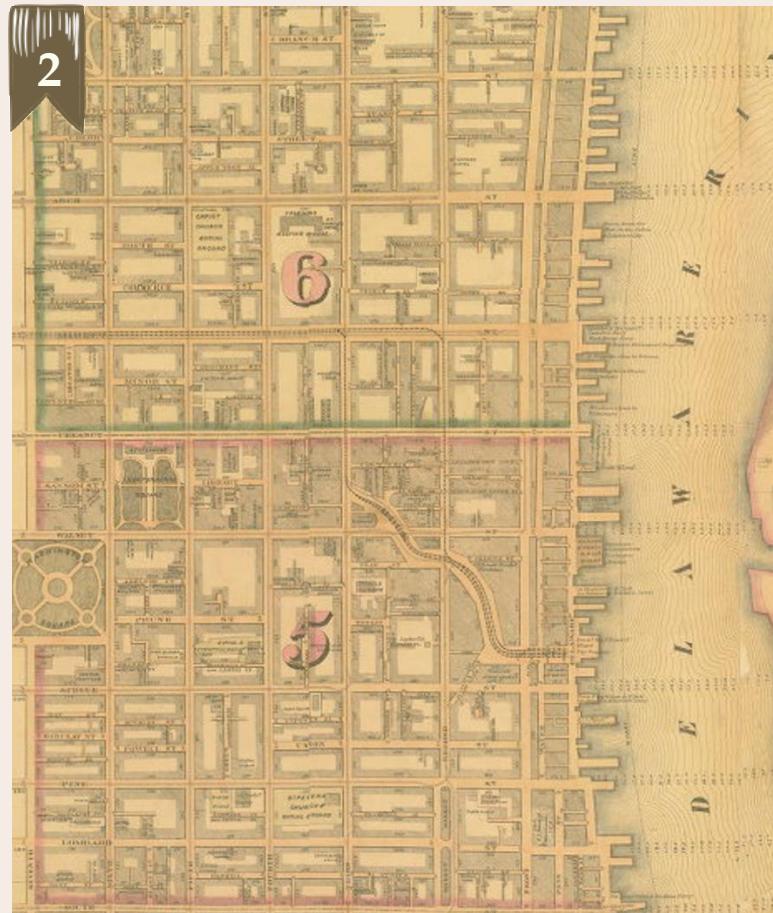
Philadelphia Land Use Map (1962) Plate 4B-1

By Zoning, Department of Public Works, Federal Works Progress Administration of Pennsylvania [Courtesy of the Free Library of Philadelphia]

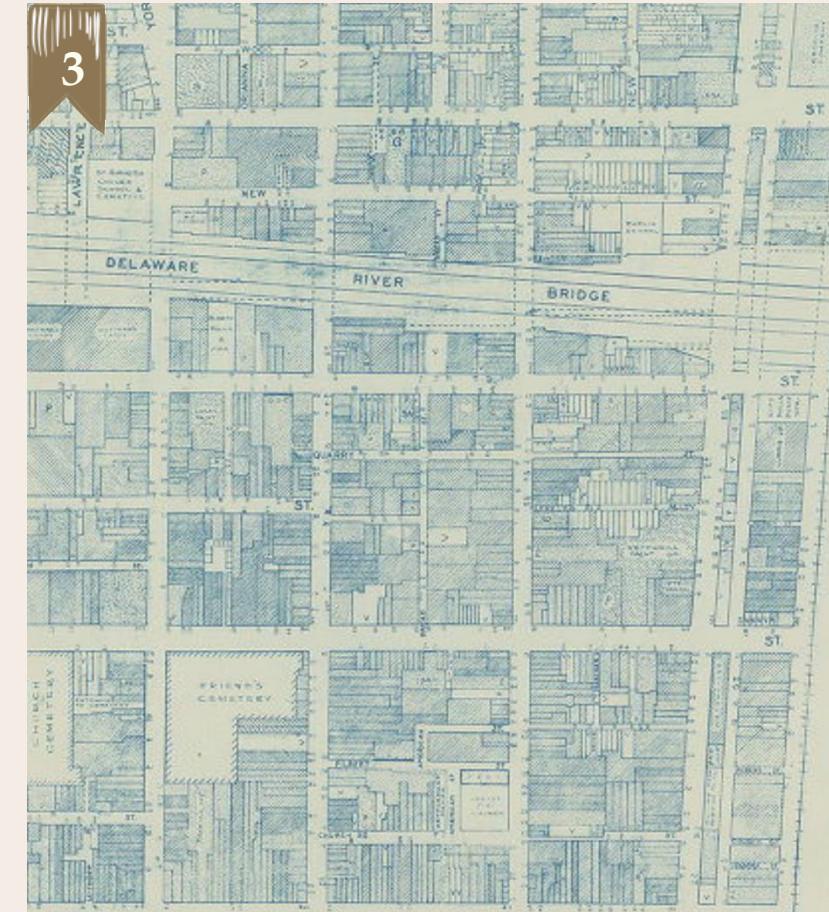
Map Collections



A Map of Philadelphia and Parts Adjacent (1750)



Smedley's Atlas of the City of Philadelphia (1862)

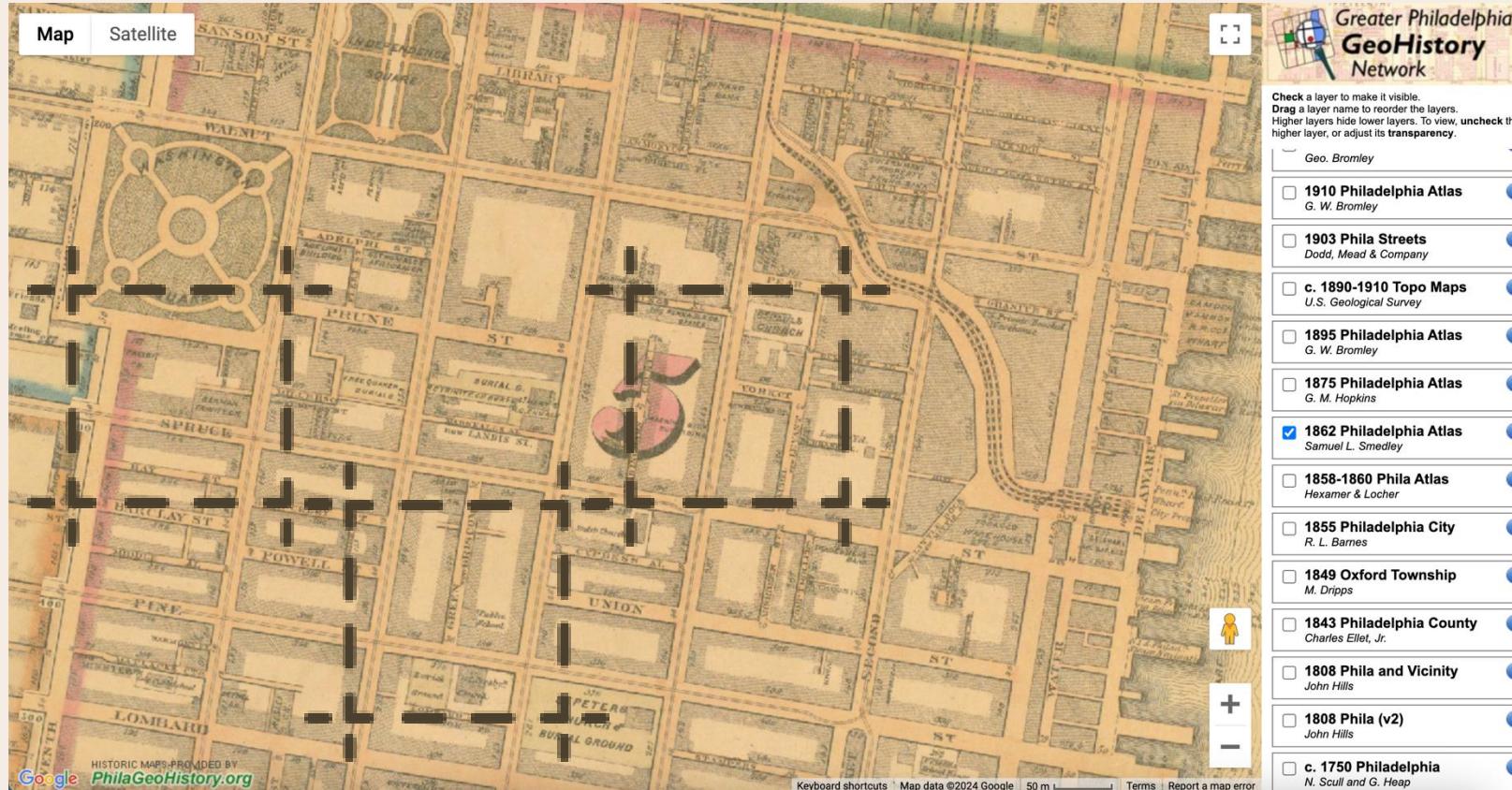


Philadelphia Land Use Map (1962)

Workflow



Workflow A

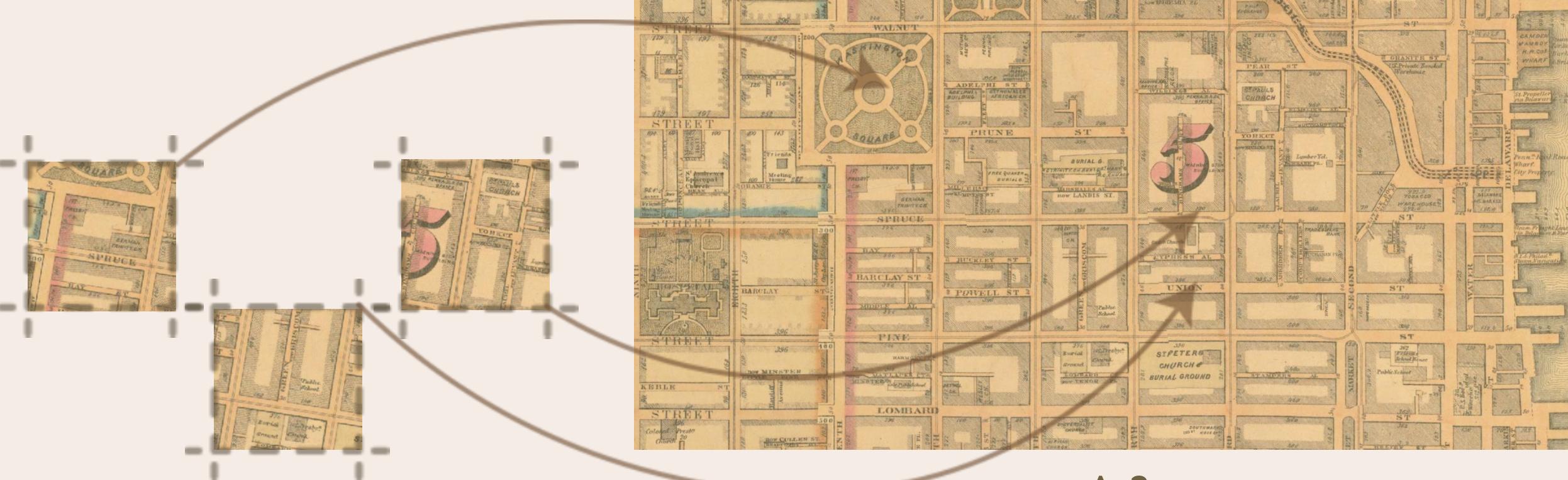


A-1

Using Philadelphia's GeoHistory website, zoom the map from each time period to the highest resolution (20m).

Select a neighborhood of interest and take as many screenshots as possible within the extent of this neighborhood!

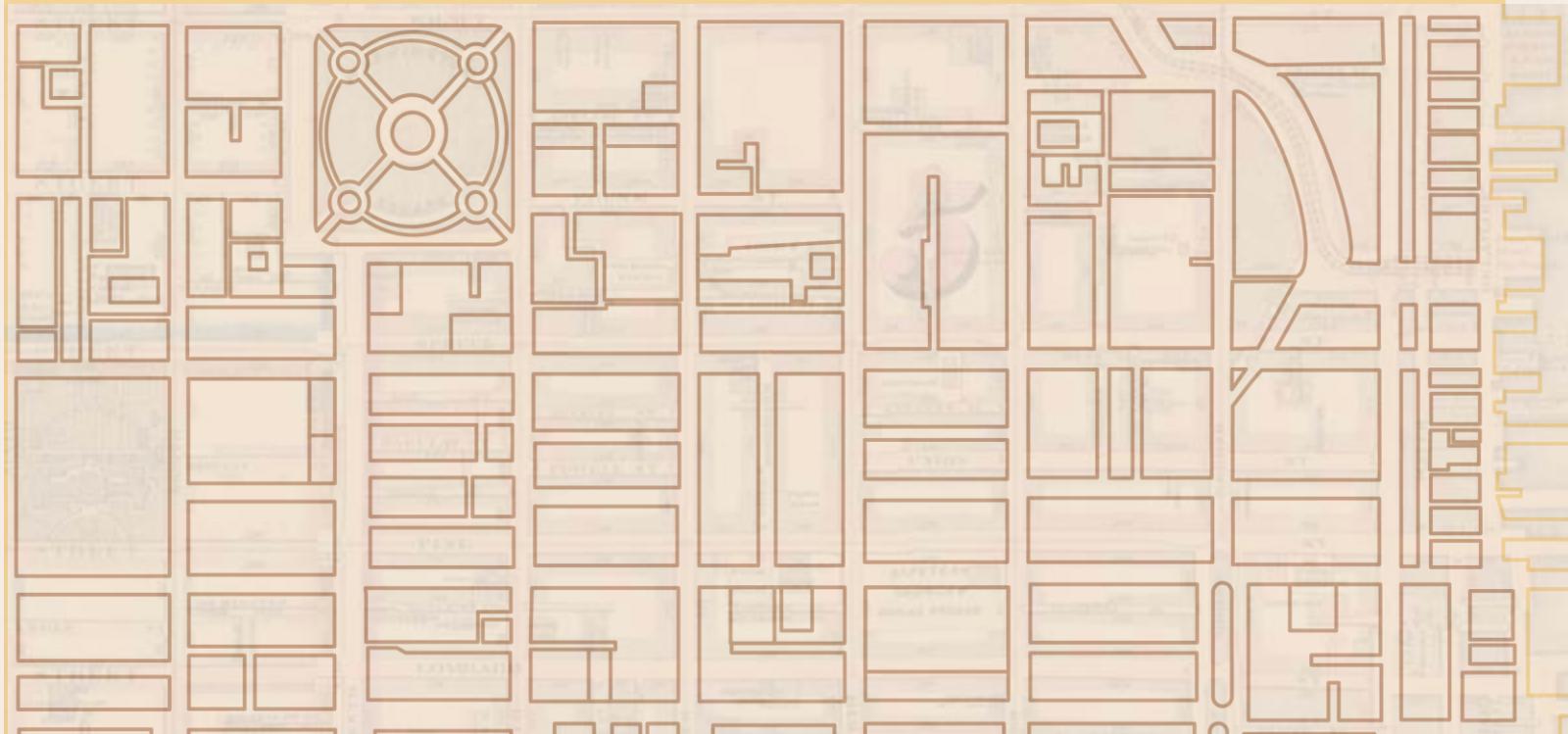
Workflow A



A-2

Arrange pieces of screenshots in the correct order and orientation to get a map of high resolution

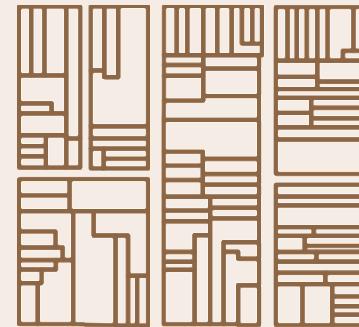
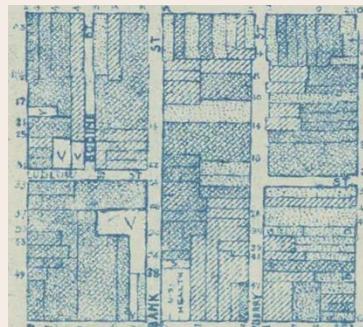
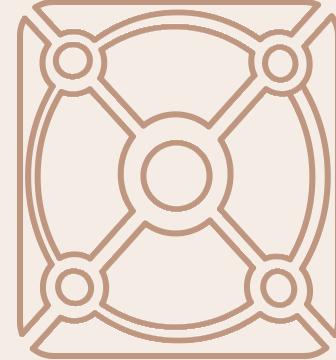
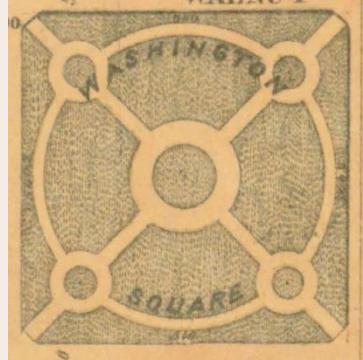
Workflow B



B-1

Using Rhino 3D, trace the lines and polygons from the high-resolution image and export the traced parcels as a PDF.

Workflow B



Rhino3D

High precision and accuracy in modeling.

Scalable to any sizes

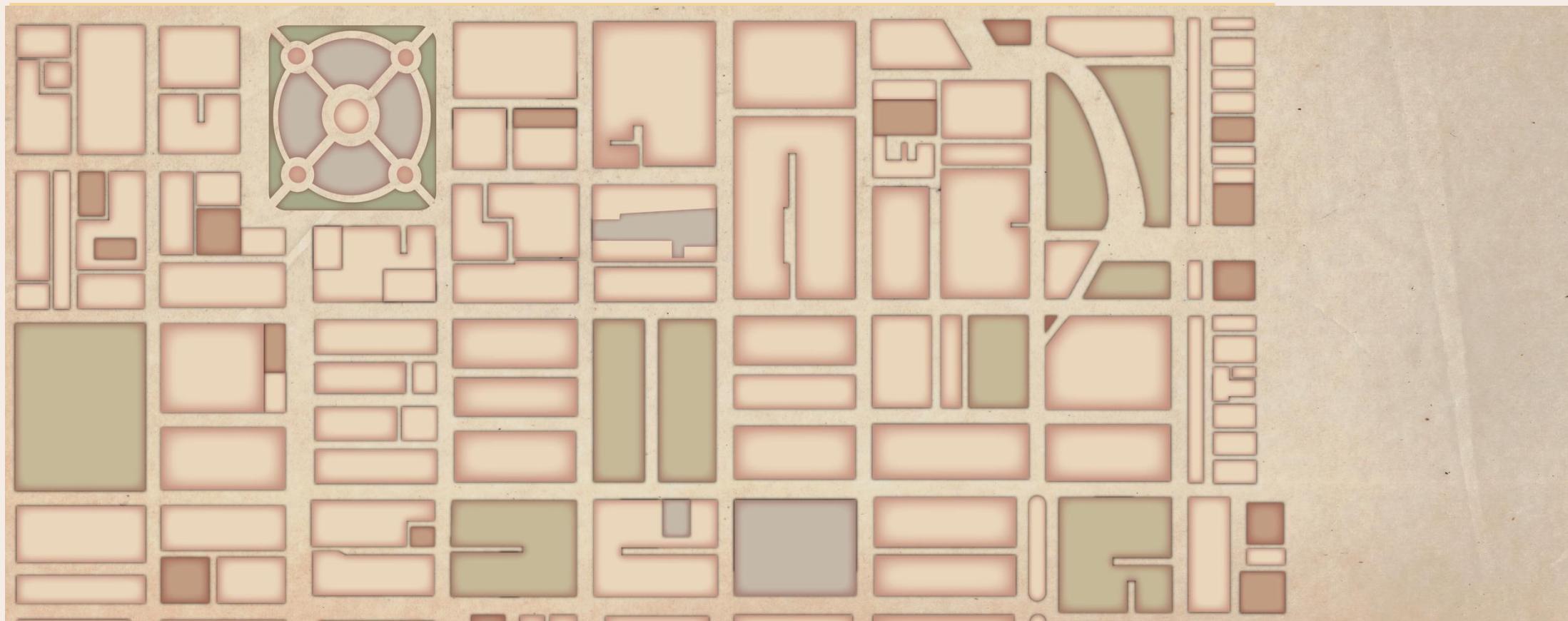
Handles complex curves and surfaces.

Powerful visualization and rendering

Support diverse file format

Rhinoceros®
modeling tools for designers

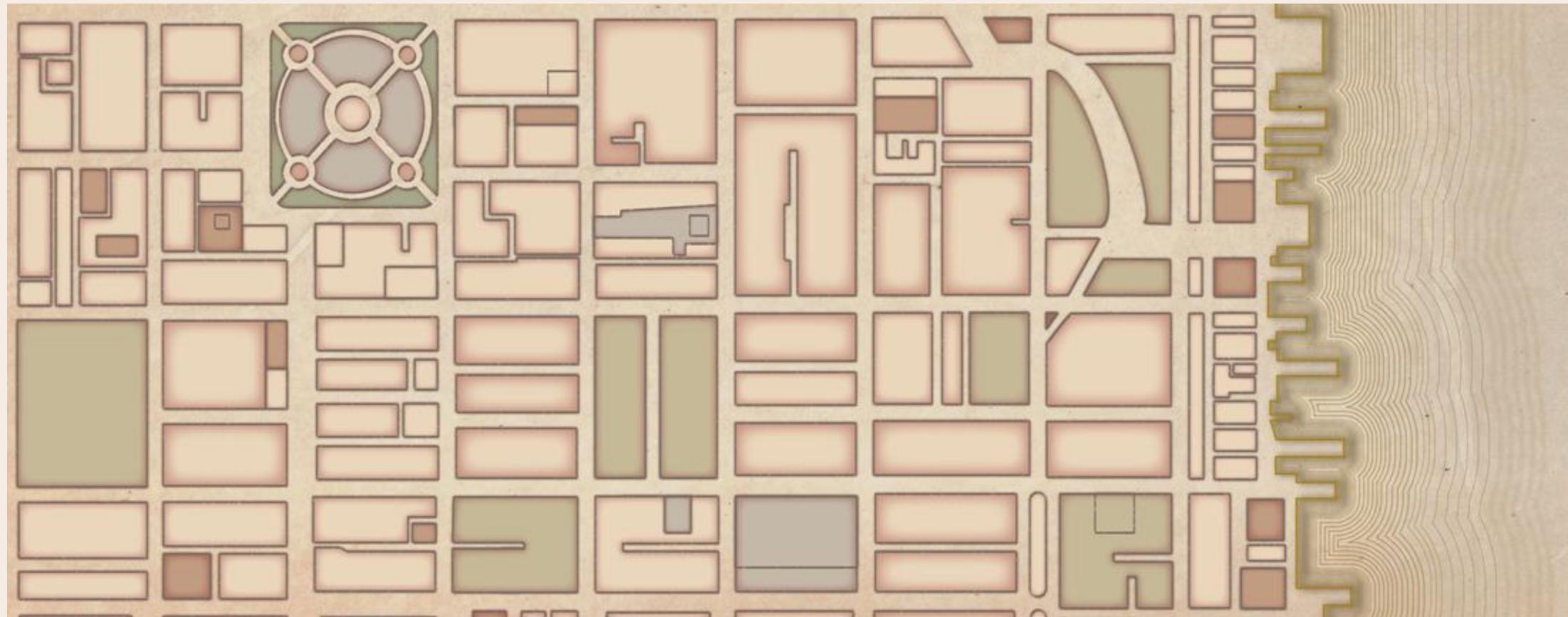
Workflow C



C-1

Start by editing the polygons from the PDF export in Illustrator through changing parcel fills, strokes, and glowing effects and shadows.

Workflow C

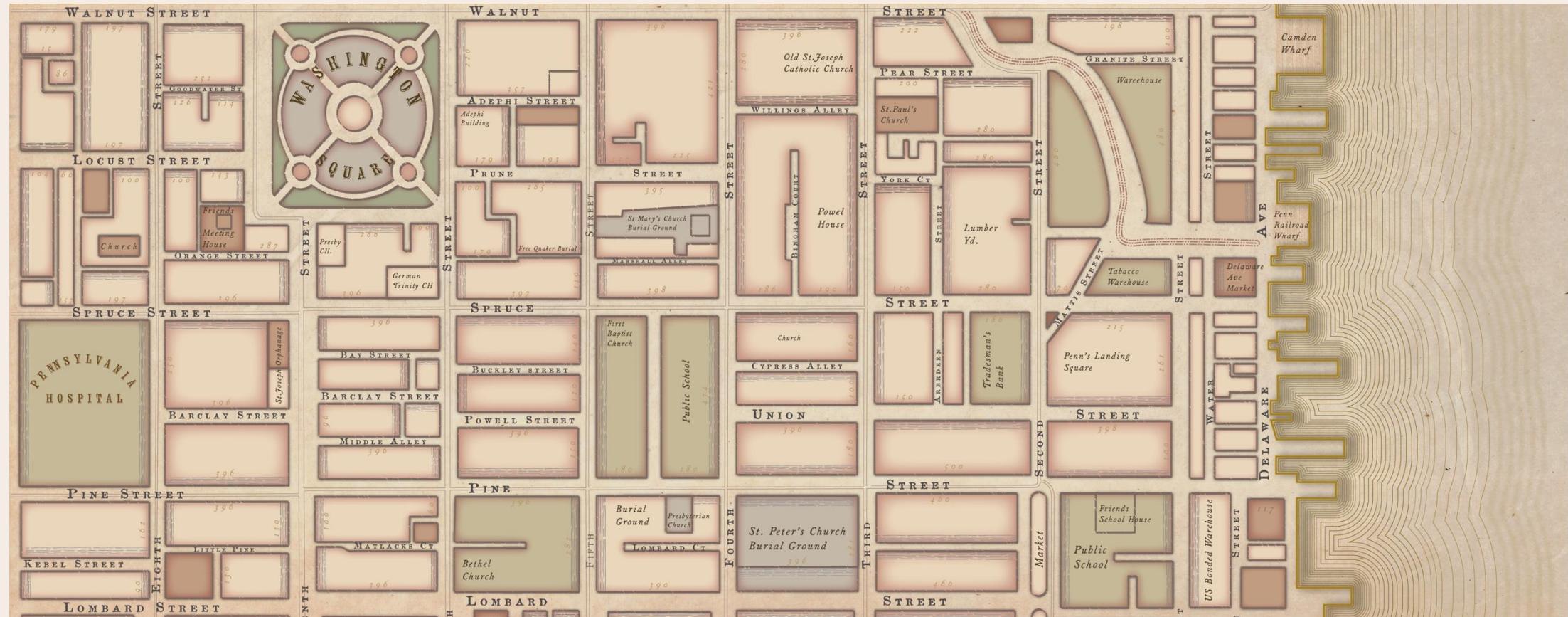


C-2

Enhance the parcel layer, stylize the wharves and the river (this process could vary depending on the year of the map and the characteristics of the neighborhood)

Workflow C

1860s Society Hill

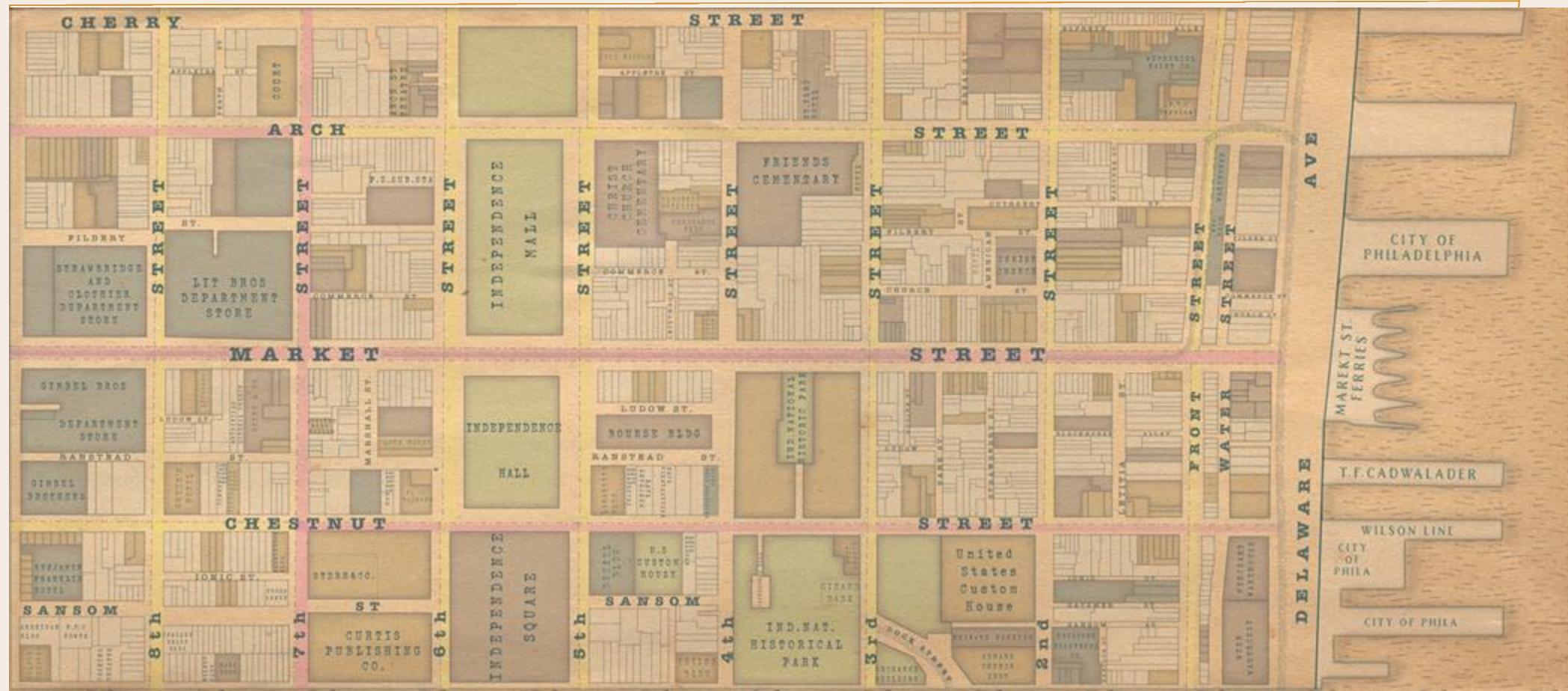


C-3

Add street centerlines and labels, plus anything specific to the time period (this process also vary depending on the year and neighborhood)

Workflow C

1960s Old City

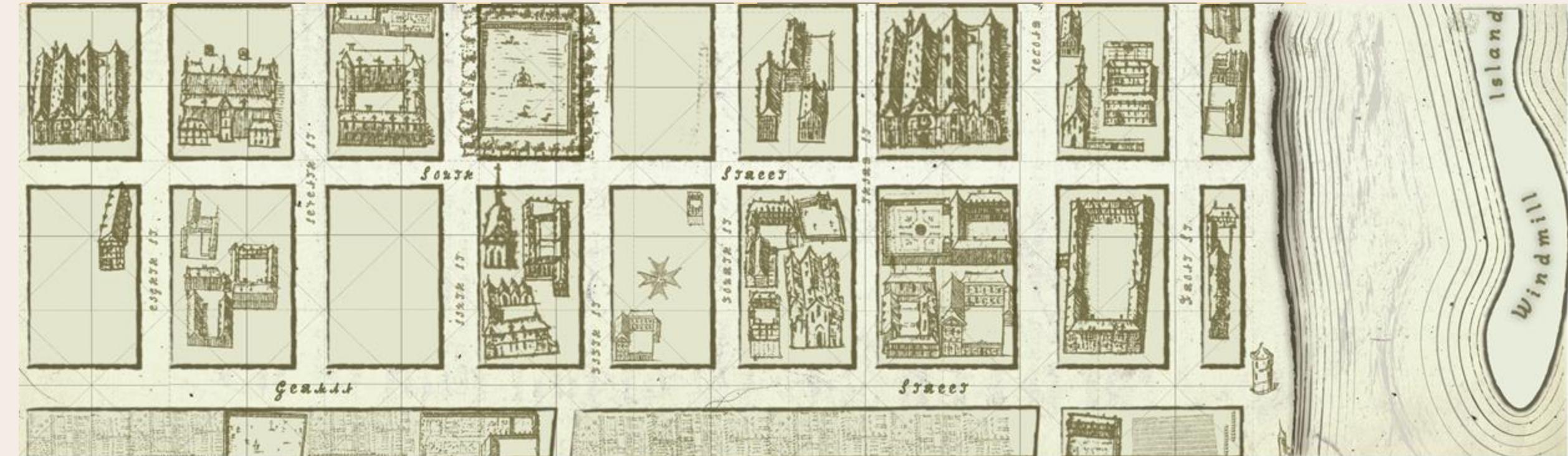


Repeat this process for all neighborhoods!

Workflow C

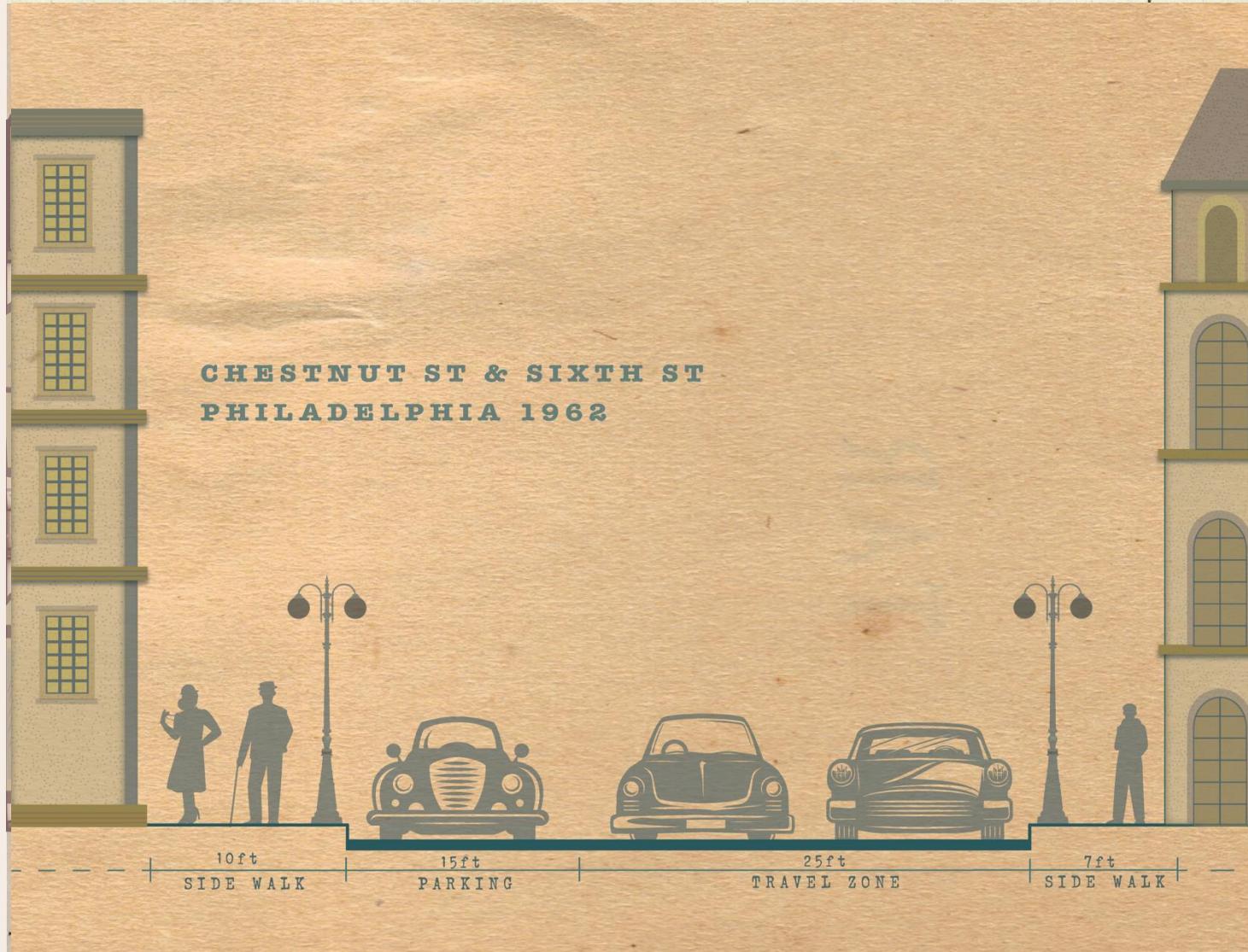
1750s Queens Village

47.2529 °N 122.4443 °W



Repeat this process for all neighborhoods!

Workflow D



D-1

Sketch the segments of streets in Rhino3D

Stylize in Illustrator

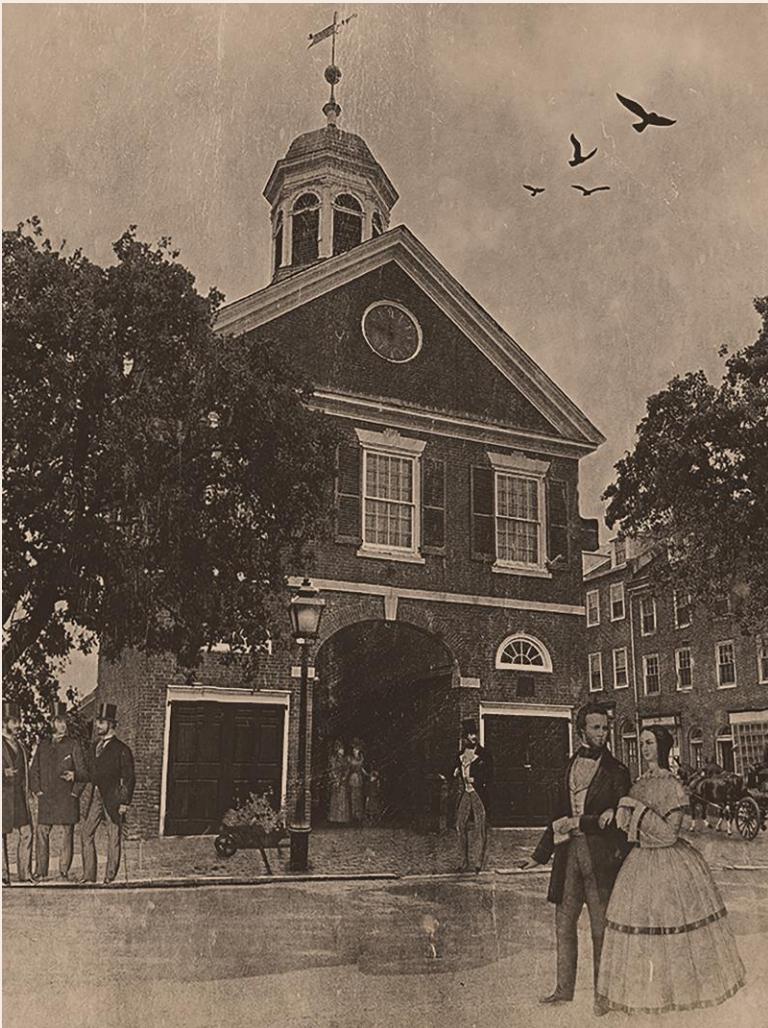
Enrich it with entourage elements specific to the time period in Photoshop

Workflow D

Before



After



D-2

Remove any modern elements from the image

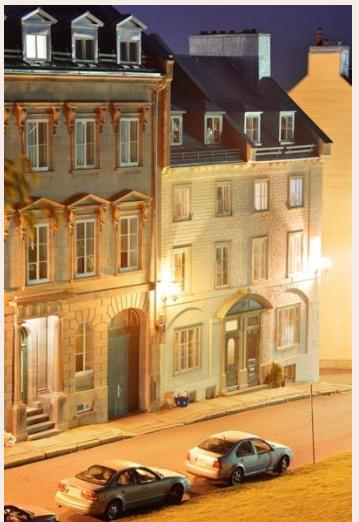
Stylize in Photoshop

Enrich it with entourage elements specific to the time period

Workflow D

D-2 Creative Version!

Before



Street with some
old buildings as
the background

Window as the
mid-ground

Subject at the
foreground

After



Workflow D

PHILADELPHIA'S URBAN LANDSCAPE EVOLUTION

200 YEARS OF CHANGE

1960s Civil Rights Era

As elsewhere in major US cities, the 1960s was a turbulent decade for Philadelphia. The city's urban landscape was shaped by civil rights struggles, demographic shifts, urban renewal initiatives, and changing economic dynamics. Manufacturing and other major Philadelphia businesses, which had supported middle-class lives for the working class, were moving out of the area or shutting down in industrial restructuring, indicating major declines in railroads. However, the city had encouraged development projects in University City in West Philadelphia and the Temple University in North Philadelphia. Some gentrification occurred, with restoration of properties in historic neighborhoods.



One aspect of the urban renewal effort in mid-20th century was the redesign of streets and transportation networks to accommodate increasing automobile traffic and facilitate urban mobility. As part of these initiatives, major thoroughfares like Interstate 95 and the Vine Street Expressway were constructed. Chestnut St, for example, became a one-way street with double travel lanes and one parking lane. Overall, the redesign of streets prioritized vehicular traffic over other modes of transportation. Pedestrian amenities such as sidewalks, crosswalks, and pedestrian signals were sometimes neglected or minimized in favor of accommodating cars and trucks. While these projects promised improved transportation efficiency, they also resulted in the demolition of thousands of homes and businesses, particularly in predominantly African American communities, leading to displacement and community dislocation.



1860s Civil War Era

In the mid and late 1800s, Philadelphia had evolved significantly from its colonial origins into an industrial and cultural center, as immigrants from Ireland and Germany streamed into the city, swelling the population of Philadelphia and its suburbs. The urban landscape of Philadelphia in this era was marked by rapid industrialization, expanding transportation networks, and the emergence of distinct neighborhoods. New factories and warehouses dotted the cityscape, while residential neighborhoods expanded outward from the city center. Despite the rapid pace of change, Philadelphia in the mid and late 1800s retained elements of its colonial heritage, with historic landmarks such as Independence Hall and the Liberty Bell serving as reminders of the city's storied past.

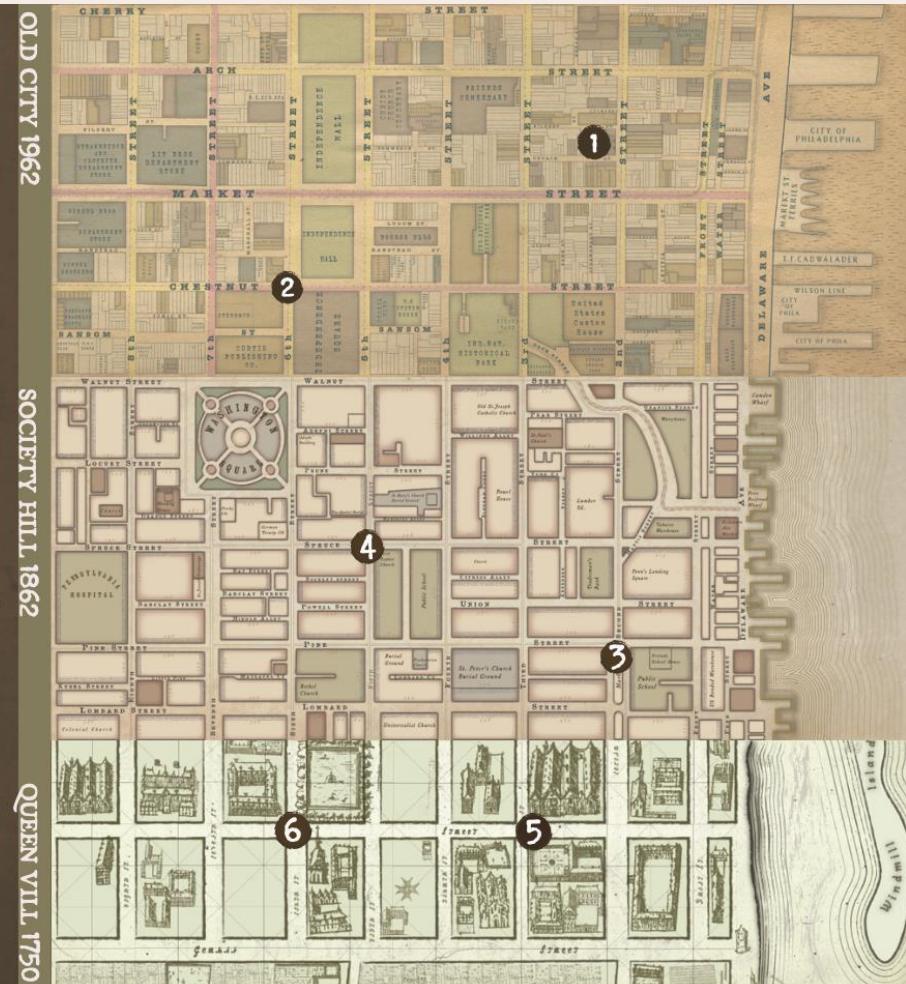


1750 Colonial Era

Like any other cities in America, Philadelphia was generally dirty, with garbage and animals littering the streets in the first half of the 18th century. By the 1750s, however, Philadelphia was turning into a major city in the American colonies, boasting a rapidly growing population and a burgeoning economy. Its urban landscape was a blend of colonial architecture, bustling streets, and a layout that reflected the city's strategic importance as a center of commerce and culture.

At the heart of Philadelphia's 18th century urban design was its gridiron street plan, a hallmark of William Penn's visionary city planning. Laid out in a grid pattern, the streets intersected at right angles, creating a clear, orderly layout that facilitated efficient movement and effective administration. Under this plan, spatial rationality and order were established. Land use was regulated, and towns and country lots were properly allocated. This subsequently opened the possibilities for infrastructure and service planning to improve the living standards of early modern cities. During that period, Market Street and High Street (now Chestnut Street) served as the major thoroughfares and were paved and illuminated with oil lamps. These streets were lined with shops, taverns, and meeting houses, pulsating with the energy of a growing commercial hub. Along the border of the city, there were also some country estates, farms, and along the fast-running streams, a few mills. The city also developed culturally and scientifically as schools, libraries, and theaters were founded.

In the 1850s, the gridiron street plan continues to develop. As the city expanded rapidly due to industrialization and immigration, new streets were added, and existing ones widened to accommodate increased traffic and population growth. Street uses were managed more effectively during this period, with specific lanes dedicated for carriages and horses, as well as emerging mode of transportation such as streetcars. Railroads were built to connect Philadelphia to other major cities. Philadelphia's waterfront area was extended. Wharves and warehouses lined the waterfront, serving as vital hubs for the import and export of goods.



D-3

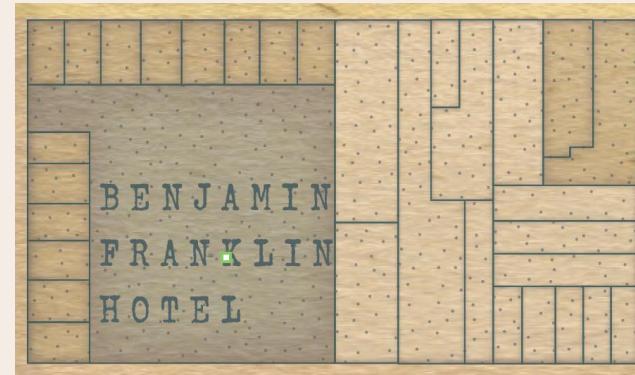
Compile the maps, street section drawings, and renderings into a poster in InDesign.

Takeaways

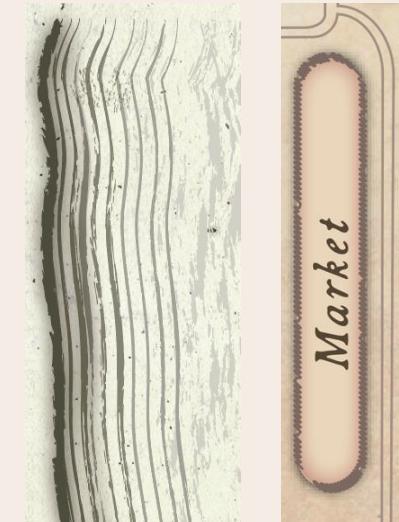
1. Stylizing Effect



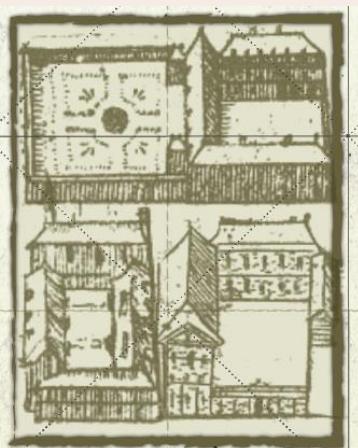
2. Fill Patterns



3. Line works (Path)



4. Paint Brushes



5. Typology

C H E S T N U T S T R E E T
P I N E S T R E E T
Colonial Church
C I T Y O F P H I L A
s e c o n d s t
E X C H A N G E
B U I L D I N G

6. Color Palette



Thank You!

Questions, comments, and suggestions welcome!



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 <https://emilyzhou112.github.io/>

