SKYSCRAPERS & SKYLINES IN EARLY 20TH CENTURY NEW YORK

HISTORICAL CONTEXT

Before the late 19th century, few buildings had been taller than five or six stories. But the new technologies of elevators and steel as a construction material changed the equation for urban and architectural development. By the early 20th century, buildings commonly stretched to 20, 30—even 50—stories. New York City was foremost among American cities as a showcase for the possibilities of tall buildings. Some of this upward climb was caused by continued technological developments, but much of it was driven by financial motives. The financial aspect of the construction of tall buildings is what you will be examining in these documents.

TASK

Using at least four of the seven documents provided in this dossier, as well as your own knowledge of United States and New York City history, answer the questions that follow each document. Your answers to these questions will help you to write an essay, in which you:

- Discuss the upward growth in the New York City skyline in the early 20th century.
- Mention causes of real estate development, as well as the factors that help to determine the height and location of tall buildings, as part of your discussion.

GUIDELINES

Be sure to:

- Address all aspects of the TASK by accurately analyzing and interpreting at least four documents
- Incorporate information from the documents in the body of the essay
- Incorporate relevant outside information throughout the essay
- Richly support the theme with relevant facts, examples, and details
- Write a well-developed essay that consistently demonstrates a logical and clear plan of organization
- Introduce the theme by establishing a framework that is beyond a simple restatement of the TASK or HISTORICAL CONTEXT and conclude the essay with a summation of the theme

THE SKYSCRAPER MUSEUM

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PART A: SHORT ANSWER QUESTIONS

1

DOCUMENT 1. HURD LAND VALUE MAP OF LOWER MANHATTAN (1903)

from *Principles of City Land Values*, by Richard M. Hurd

This map illustrates value of land at various locations throughout Lower Manhattan. The circled numbers indicate the price per square foot of land at that particular location. The little rectangular shapes jutting out from Manhattan Island into the Hudson and East Rivers represent piers. This map was originally included in one of the first books to attempt to explain the theory of the structure of cities and to quantify the value of land within them.

Fig. 163 Land values in Lower Manhattan (1903), dollars per square foot.

1. What do you observe about the pattern of land values in this image?

2. Some locations have significantly higher land values than others, despite their relative closeness. What might cause these differences?

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DOCUMENT 2. ANNOTATED NEW YORK CITY SKYLINE (1924)

The Skyscraper Museum Collection

This postcard shows the Manhattan skyline. Manhattan was a popular tourist destination, unusual among cities for its dense population of skyscrapers. Only the image and caption below the image are part of the original postcard. The notes given directly on the picture were added to help you see where the buildings are located in relation to specific streets and neighborhoods.

1. Notice the buildings and other structures along the river. How might you characterize these buildings? What activity appears to be going on along the river?

2. Where do the tallest buildings seem to be grouped together? What might account for the dramatic differences between the buildings in the center of the Island, and those along the river?

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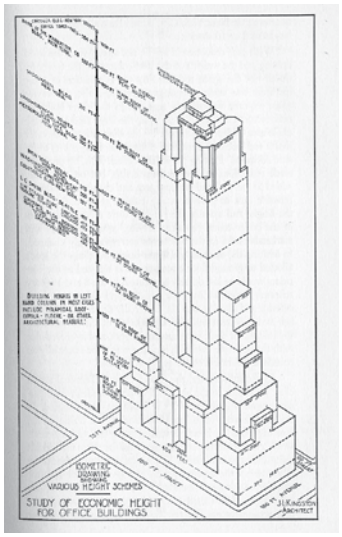
DOCUMENT 3. STUDY OF ECONOMIC HEIGHT FOR OFFICE BUILDINGS AND SUMMARY OF INVESTMENT FOR VARIOUS SKYSCRAPER HEIGHTS (1930)

From *The Skyscraper: A Study in the Economic Height of Modern Office Buildings,* by W.C. Clark and J. L. Kingston

Both of these images were taken from a book on the economy of skyscrapers, written in 1930. The book was the first of its kind, seeking to explore the phenomenon of the skyscraper from a factual, economic perspective rather than an aesthetic, architectural one.

3A



The drawing, "Study for Economic Height for Office Buildings," compares skyscrapers of various sizes. The building used in the drawing reflects the setback style of skyscraper architecture that was popular at the time, partly due to zoning regulations in New York City. Zoning regulations are laws that can determine the height, shape, or use of buildings, but you do not need zoning information to understand this or any other document in this dossier.

3B

TABLE No. 1

SUMMARY OF INVESTMENT COST, GROSS AND NET INCOME AND RETURN UPON INVESTMENT

(Assuming land value at $200 per square foot)

	8-Story Building	15-Story Building	22-Story Building	30-Story Building	37-Story Building	50-Story Building	63-Story Building	75-Story Building
			(in thousands of dollars)					
INVESTMENT								
A. Land (81,000 sq. ft. @ $200)	$16,200	$16,200	$16,200	$16,200	$16,200	$16,200	$16,200	$16,200
B. Building	4,769	7,307	9,310	11,775	13,808	16,537	19,390	22,558
C. Carrying Charges:								
1. Interest during construction:								
(a) Land (6% on cost for full period)	810	972	1,134	1,296	1,458	1,620	1,780	1,944
(b) Building (6% on cost for half period)	119	219	326	471	622	826	1,065	1,353
2. Taxes during construction—Land	292	350	408	466	524	584	642	700
3. Insurance during construction	3	5	8	12	21	35	65	95
Total Carrying Charges	$1,224	$1,546	$1,876	$2,245	$2,625	$3,065	$3,552	$4,092
D. Grand Total Cost	22,193	25,053	27,386	30,220	32,633	35,802	39,142	42,850
Total assignable to Land	17,302	17,522	17,742	17,962	18,182	18,404	18,622	18,844
Total assignable to Building	4,891	7,531	9,644	12,258	14,451	17,398	20,520	24,006
INCOME								
E. Gross Income	1,819	2,780	3,483	4,181	4,755	5,581	6,302	6,901
F. Expenses:								
1. Operating	311	482	592	723	814	942	1,058	1,213
2. Taxes	479	541	591	653	725	774	846	926
3. Depreciation	95	146	186	235	276	331	388	451
Total Expenses	$885	$1,169	$1,369	$1,611	$1,795	$2,047	$2,292	$2,590
G. Net Income	934	1,611	2,114	2,570	2,960	3,534	4,010	4,311
NET RETURN								
H. Net Return on Total Investment	4.22%	6.44%	7.73%	8.50%	9.07%	9.87%	10.25%	10.06%
I. Increase in Investment from Last Addition of Stories	....	$2,860	$2,833	$2,834	$2,613	$3,169	$3,340	$3,708
J. Increase in Net Income Resulting Therefrom	....	677	503	456	390	574	476	301
K. Net Return on Increase in Investment	....	23.69%	21.51%	16.09%	16.13%	18.13%	14.25%	8.12%

The building heights in the table, Summary of Investment for Various Skyscraper Heights, correspond with those in the Economic Height drawing. The table provides the costs and income associated with various skyscraper heights, and then calculates the return on investment for each. Return on investment is an economic term for the amount of income a particular investment is estimated to make for the investor. At the very least, the Return on Investment needs to equal the amount of the investment itself, so that the investor does not lose money.

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DOCUMENT 3. STUDY OF ECONOMIC HEIGHT FOR OFFICE BUILDINGS AND SUMMARY OF INVESTMENT FOR VARIOUS SKYSCRAPER HEIGHTS (1930)

From *The Skyscraper: A Study in the Economic Height of Modern Office Buildings,* by W.C. Clark and J. L. Kingston

1. What is the net income for structures at each of the following heights?

   37 STORIES_____

   50 STORIES_____

   63 STORIES_____

   75 STORIES_____

2. Based on the information in this document, what do you think would be the ideal height for a skyscraper? Why?

3. For the tallest structure shown here, how does the return on investment compare to the 63-story height? What might explain this?

1 NAME_____

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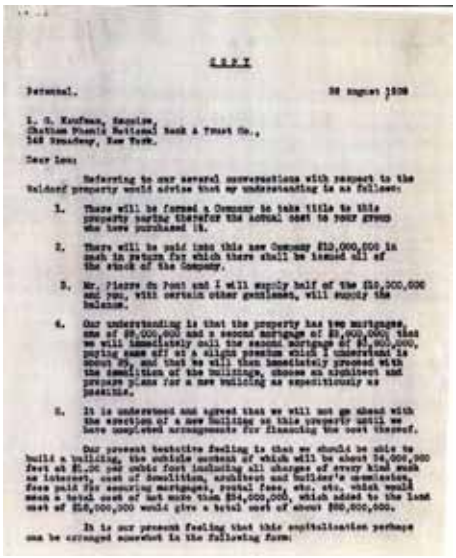
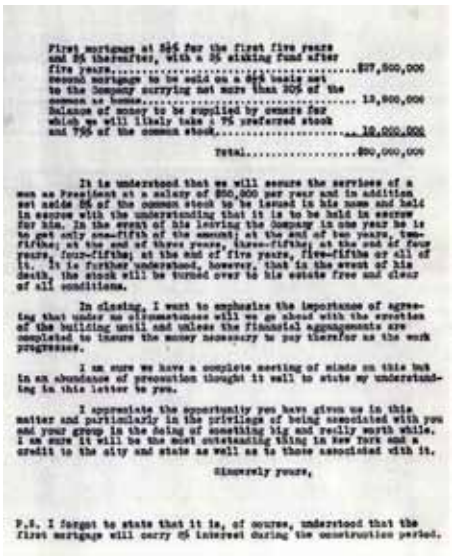
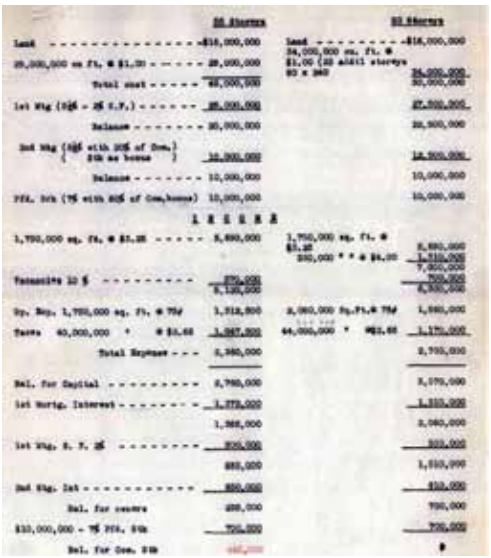
4 DOCUMENT 4. RASKOB LETTER (1929)

Hagley Museum Library—Wilmington, Delaware

This letter, from John Raskob to his business partner, Louis G. Kaufman, summarizes the key understandings by which the two men, along with select other investors, would enter into a business partnership to construct an office building. This building would ultimately become the Empire State Building. The letter consists of two pages of Raskob's typed letter, as well as a table.







1. What is Raskob's main concern in this letter?

2. As he was writing this letter, how many stories (spelled "storeys" in this document) did Raskob intend for the completed building to contain? How do you think he and his business partners arrived at this decision?

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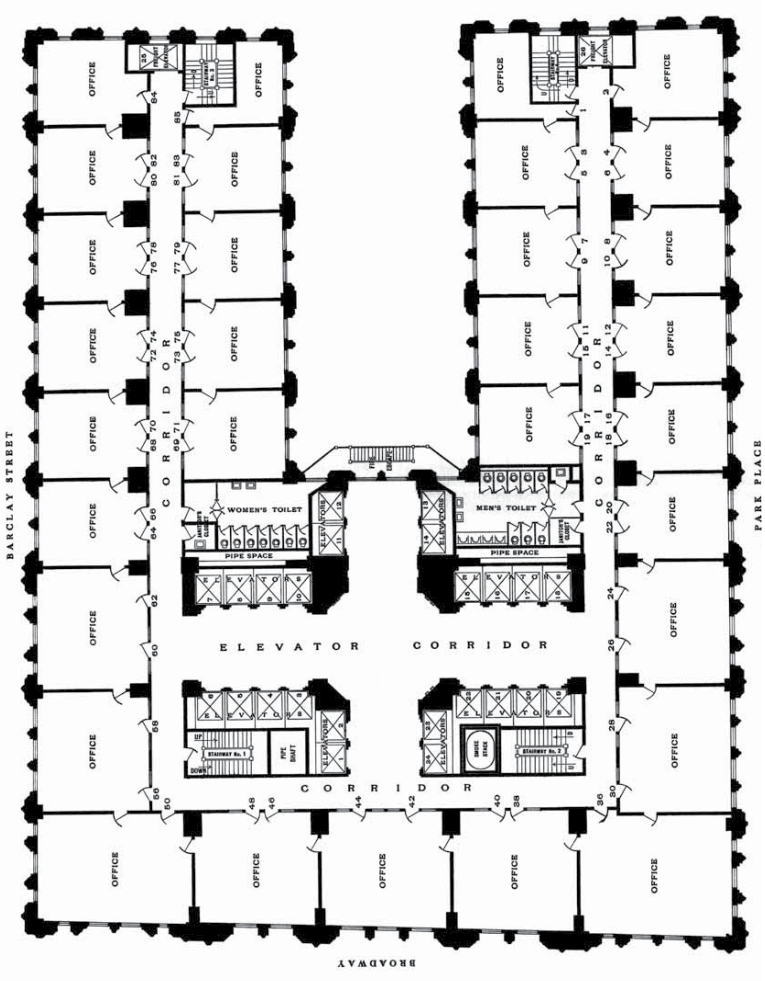
DOCUMENT 5. WOOLWORTH BUILDING FLOOR PLAN

from building rental brochure (1912-13)

This floor plan was published in a brochure used to advertise office space for rent in the Woolworth Building, one of several floor plans that displayed different office configurations to potential tenants. This floor plan helped tenants see how many offices would be on a floor, which offices had windows, where the offices were in relation to the elevators, the size of the offices, and other important information. The brochure was released even before construction on the building had been completed, in order to secure tenants and collect initial rent money. Investors wanted buildings to have tenants ready to move in when a building opened, to ensure that they would be able to collect rent money immediately and begin generating a good Return on Investment.



1. Note two characteristics of this floor plan, ex: its overall layout or shape, placement of windows, placement of elevators, etc.

2. In 1913, when this building was designed, many modern technologies did not exist: fluorescent lighting, modern air conditioning and heating. What are two ways that this influenced the design of this building.

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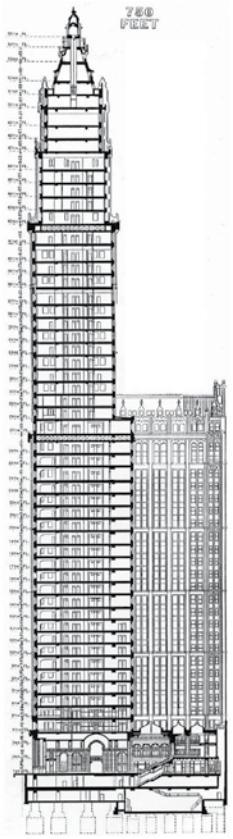
DOCUMENT 6. WOOLWORTH BUILDING SECTION DRAWING

from building rental brochure (1912-13)

This section drawing was published in a brochure used to advertise office space for rent in the Woolworth Building. The section drawing illustrated to potential renters the overall height of the building, the size of the floors, and where a given floor would be located in relation to others. It also provided a context for the sample floor plans provided in the brochure, showing the height of the U-shaped base structure as well as the tower above it.



1. What is one reason tenants might be willing to pay more for an office on an upper floor, in the tower?

2. What might be some of the financial reasons for this design, from the perspective of the investor or building owner?

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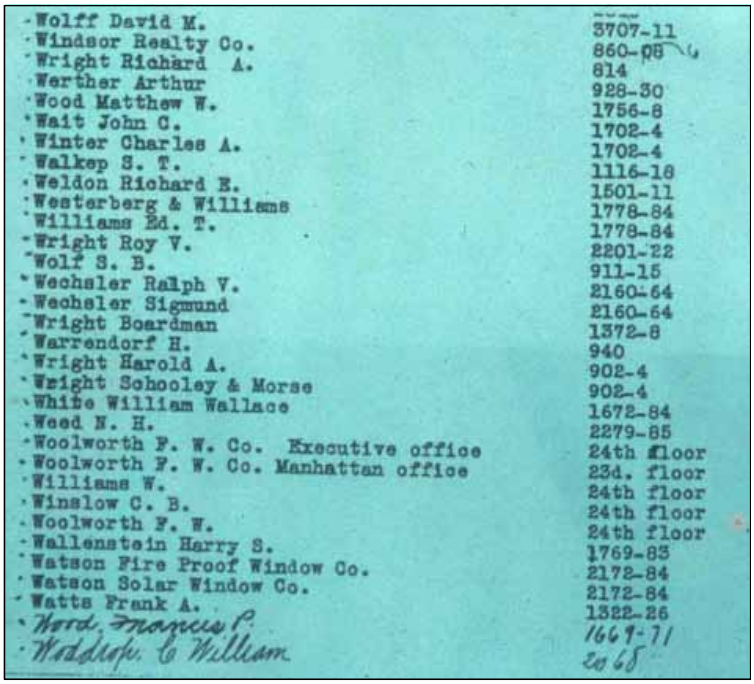
DOCUMENT 7. WOOLWORTH BUILDING TENANT LIST

The Skyscraper Museum Collection

This excerpt from the Woolworth Building tenant list shows just a few of the 600 individuals and businesses on the complete list of tenants. The tenant names are on the left, and the numbers of the office(s) they rented are shown on the right. The office number begins with the floor number and is followed by the number of the unit. For example, unit 814 (Arthur Werther) is the 14th unit on the 8th floor and Unit 940 (H. Warrendorf) is the 40th unit on the 9th floor. Many companies, such as Richard E. Weldon, leased more than one unit. Weldon, who is listed in units 1501-11, would have occupied a total of 11 units on the 15th floor (1501, 1502, 1503, etc.).

The Woolworth Company was a large organization, with hundreds of employees who required office space. A small fraction of these employees actually worked in the Woolworth Building.



Wolff David M.	3707-11
Windsor Realty Co.	860-68
Wright Richard A.	814
Werther Arthur	928-30
Wood Matthew W.	1756-8
Wait John C.	1702-4
Winter Charles A.	1702-4
Walker S. T.	1116-18
Weldon Richard E.	1501-11
Westerberg & Williams	1778-84
Williams Ed. T.	1778-84
Wright Roy V.	2201-22
Wolf S. B.	911-15
Wechsler Ralph V.	2160-64
Wechsler Sigmund	2160-64
Wright Boardman	1372-8
Warrendorf H.	940
Wright Harold A.	902-4
Wright Schooley & Morse	902-4
White William Wallace	1672-84
Weed N. H.	2279-85
Woolworth F. W. Co. Executive office	24th floor
Woolworth F. W. Co. Manhattan office	23d. floor
Williams W.	24th floor
Winslow C. B.	24th floor
Woolworth F. W.	24th floor
Wallenstein Harry S.	1769-83
Watson Fire Proof Window Co.	2172-84
Watson Solar Window Co.	2172-84
Watts Frank A.	1322-26
Ward, Francis P.	1669-71
Waddell & William	2065

1. The Woolworth Building was not the headquarters of the Woolworth Company, but it did house some of its offices. Which offices were located in the Woolworth Building? On what floors were those offices?

2. Why would Frank Woolworth, founder of Woolworth's, invest in a building that would bear his name and hold the title of the tallest in the world, but choose not place the majority of his employees there? List some possible reasons.

END OF DBQ DOSSIER 1 DOCUMENTS

1

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PART B: ESSAY

DIRECTIONS

Write a well-organized essay that includes an introduction, several paragraphs, and a conclusion. Use evidence from at least four documents in the body of the essay and additional outside information. Support your response with relevant facts, examples, and details.

TASK

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- Mention causes of real estate development, as well as the factors that help to determine the height and location of tall buildings, as part of your discussion.

HISTORICAL CONTEXT

Beginning in the late 19th century, buildings began to rise skyward in height. Few buildings had been taller than five or six stories at the beginning of the century, but the emergence of steel as a construction material and the invention of the elevator changed the equation for urban and architectural development. By the early 20th century, buildings more commonly stretched to twenty or thirty—even fifty—stories. New York City was foremost among American cities as a showcase for the possibilities of tall buildings. Some of this upward climb was caused by continued technological developments, but much of it was driven by financial motives. The financial aspect of the construction of tall buildings is what you will be examining in these documents.

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