Root, Khan, and the rise of the Skyscraper (Chicago)

Themes:
The birth of the modern skyscraper
Tensions between architectural and structural expression in buildings
Expression of structure in skyscraper building form
Stiffness in skyscrapers
Chicago 1871-1893
The business buildings of Burnham & Root were the first tall buildings in which the conditions both of commercial architecture in general and of elevator architecture in particular were recognized and expressed.

—Montgomery Schuyler, 1895

Yes, we made all these buildings together, but they are chiefly his, for he it was who did the designing....

—D. H. Burnham, 15 January 1891
Sullivan’s Wainright in St. Louis
Viollet-le-Duc
Montauk Block

hardpan

12-15'

Squishy clay

rock
Rookery
Monadnock
The (First) Chicago School

Jenney
Sullivan
Burnham
Root
...

...
Chicago 1930-1970
“The depression that began in the 1930’s and was ended ten years later only by a massive program of military procurement was a disaster for the nation as a whole but an absolute and unmitigated calamity for Chicago. It was not only the collapse of the public and private economy; it was the Sophoclean reversal of fortune, from the expansive force of the twenties … to the impotence and hopelessness of the thirties.”

“It was 12 years after WWII ended before a new building would be built in the Chicago CBD.”

_Chicago 1930-1970, Carl Condit_
Ludwig Mies van der Rohe
Seagram Building, New York.
Photo by Jean Alejandro di Bergerae Stephenson Davilus
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Structural Columns  Structural Beams  Architectural Mullions
Load Path?
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Marina city
Chicago Civic Center – now the Daley center
John Hancock Building
Khan
1929-1982
marine
midland
bank
1 Shell Plaza
3 Premium for height is largely due to wind loads.