THE GREATEST GRID
The Master Plan of Manhattan 1811–2011

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The exhibition is supported by generous grants from:
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The exhibition is also made possible with funds from:
Manhattan Delegation, New York City Council
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The companion book is supported by:
Furthermore: A Program of the J.M. Kaplan Fund

© Detail of The Commissioners’ Plan of 1811, Figure 8
Birthdays come and go, but I am grateful that Susan Henshaw Jones and Sarah Henry were persuaded that this one should be noted. I thank the team at the Museum of the City of New York for their commitment to this project, most especially to Susan, whose dynamic leadership has made the Museum of the City of New York as exciting as its namesake city; to Sarah, whose incisive intellect and story-telling mastery make her, as far as I am concerned, an ideal thought partner; and to Autumn Nyiri, whose organizational skills were indispensable to the realization of this project. Ever since working with Wendy Evans Joseph on an exhibition about Frank Lloyd Wright’s towers more than a decade ago, I dreamed of working with her on another project as the exhibition designer. She asks questions about how to exhibit objects that reveal new perspectives and expand the ways to understand the subject. In designing the book and the exhibition graphics, Luke Bulman and Jessica Young of Thumb were especially thoughtful about the play between abstract and concrete qualities of the Manhattan grid. Jeffrey Ribeiro, an urban planner in the making, was the effective editorial assistant on the book. My gratitude to Carolyn Yerkes and Andrea Renner, the assistant curators of The Greatest Grid, is commingled with intense pride and affection. As this book was completed, these two extraordinary former students of mine completed their PhDs and launched their professional careers. Carolyn demonstrated her amazing range and reach as she effortlessly moved from the early modern period, her primary field of research, into modern urban theory in her contributions to this book. From the beginning of this project, Andrea infused it with her rigor, creative research, attentiveness to each object, and nuanced interpretations. The Greatest Grid could not have been completed without Andrea, whose intelligence touches every part of it.

I relish the chance to thank those I love and whose love sustained me during a challenging time: Elizabeth Easton, Sarah McPhee, and Mariët Westermann for their precious gift of abiding friendship; my devoted, unstinting mother Harriet Ballon Lucks of indomitable spirit; Orin Kramer, my resolute husband with invincible powers of reasoning that bring clarity and calm, and our beloved children Sophie and Charles, a miraculous trio that gave me what no medicine could, a profound sense of connection, enveloping love, and strength.

Like the grid, this book was enriched by multiple voices. New York has attracted a community of outstanding scholars and urban thinkers. I am grateful that so many were willing to participate in this project. The authors of the catalog entries are indicated by the initials listed below.

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KA Kate Ascher  
HB Hilary Bacon  
MH Marguerite Holloway  
BH Bill Hubbard  
WE Wendy Evans Joseph  
MK Matthew Knutzen  
EK Gerard Keopez  
JMS Joanna Merwood-Salaskey  
MM Michael Miscione  
MP Max Page  
AR Andrea Renner  
JR Jeffrey Ribeiro  
BR Ruven Rose-Redwood  
ES Eric Sanderson  
CS Carol Smith  
CW Carol Willis  
CY Carolyn Yerkes
The Commissioners' Plan of 1811
credited Morris with running the state com-
mmission, which perhaps shows a vision of or-
der and legality he had for Manhattan, but we have no evidence. He never detailed the commission’s work in other public or per-
sonal documents. The legislature removed him from the commissioners’ plan in 1811 as written with Morris’s elegance and clarity but no individual authorship was claimed and no early drafts have emerged that might reveal Morris’s specific contribu-
tions.

17. John Rutherfurd

George Catlin, John Rutherfurd, nd. Oil on panel
Figure 17. Figure 18. Collection Zimmerli Art Museum

John Rutherfurd (1760–1840) was the only one of the three 1811 commissioners, John

Rutherfurd, who never detailed the commission through the influence of fellow

commissioner and relative Gouverneur Morris (Rutherfurd was married to a

doughter of Maurice Morris), who may have desired a giant silly Rutherfurd was a Morris charmer, after Morris’s
dethronement. Rutherfurd claimed that Morris had originated the idea of the Rin Cano,
an assertion Morris never made. Judging from Morris’s frequent diary references to

himself, Morris was probably unaware of Rutherfurd’s absence from or liability to

commission duties.

Of the three 1811 commissioners, John Rutherfurd (1760–1840) was the only one

to have a long and illustrious career of public service. Rutherfurd was associated with

the least part of the commission’s work, with the headstrong visionary Morris and the skilled

surveyor Boies With dominating the decision-
making.

Some contemporaries, prepared by the

vagaries of cursive and pronunciation, mis-

kitty spelled his name Rutherfurd, which

later generations of the family, perhaps with a sigh, eventually adopted. GK

Precedents and Context

18. Law of the Indies

Figure 19.

Figure 19. The gridiron plan was modeled in part on

the example of ancient Roman campagna, where the grid became a symbol of rational

order and regularity he had for Manhattan,

the Delaware and Schuylkill Rivers, Penn

and later generations of the family, perhaps

with a sigh, eventually adopted. GK

the example of ancient Roman campagna, where the grid became a symbol of rational

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with a sigh, eventually adopted. GK

...
22. The rectangular survey of the United States

“Plat of the seven ranges of townships being part of the territory of the United States, N.W. of the River Ohio / surveyed in conformity to an Ordinance of Congress of May 20th, 1785 under direction of Thos. Hutchins, late geographer to the United States”, engraved by J.R. Berkin, 1796. Hand-colored lithograph.

In 1785 the Continental Congress conceived the idea of selling its lands northwest of the Ohio River to help pay down the Revolutionary War debt. Its plan was to divide the territory into townships six miles square, then to divide every other township in a checkerboard of thirty-six one-square-mile lots (later called sections). The undivided townships would be sold to land companies, while the square-mile lots would be sold directly to individual settlers as family farms.

This idea was completely without precedent in the history of land distribution. By the eve of the Revolution, it had become common practice in New England to survey unclaimed land into six-mile-square townships and then sell them to “proprietors.” But within those square boundaries, the proprietors laid out farms in patterns that accorded with the topography and in sizes rarely exceeding a few acres. None had ever conceived the idea of a family farm fully one mile square—640 acres—laid over the landscape with no regard to natural features. And yet, this was the charge Congress laid before its new Geographer of the United States, Thomas Hutchins. He was to go to the recently surveyed point where the Pennsylvania border touches the north bank of the Ohio River, and from there project a line due westward. At intervals of one mile along that line, a team from one of the thirteen states would drive southward back to the Ohio River, laying out a column of townships (to be called a range of townships) and dividing every one into thirty-six lots. Hutchins was dogged by Indian raids, and in three surveying seasons he could complete only seven of these ranges of townships. This is the map Hutchins presented to Congress to record his survey of what has since been called the Seven Ranges.

23. Plans to rebuild London

John Rocque, Views of the city of London before and after the 1666 fire, after Christopher Wren’s Plan for rebuilding the city, 1758. Yale Center for British Art, Paul Mellon Collection

When the Great Fire of London burned out on September 5, 1666, the conflagration had destroyed much of the city’s medieval core. John Evelyn, a witness to the devastation, wrote that the fire had burned London’s “churches, public halls, exchange, hospital, monuments, and ornaments … I went again to the ruins, for it was no longer a city.” In response to the disaster, the government of Charles II formed a commission of architects and surveyors who were tasked with leading the rebuilding of London. Several of the commissioners, as well as John Evelyn, drew up their own designs for a new city. Their plans reflected a common desire that the incineration of the old city fabric, though tragic, should be taken as an opportunity to replace London’s narrow, twisting streets and fragmented neighborhoods with a modern urban vision.

Christopher Wren imagined a new London with a regularized grid of rectangular blocks running parallel to the Thames, crossed by broad avenues radiating out from the rebuilt St. Paul’s cathedral. But although it had lost its buildings, London was not a blank slate; rather, it was covered with property lines that the city’s inhabitants wanted to maintain. Instituting any of the proposed plans for redesigning the city would have meant displacing all its residents and forcing them to sell their lots—a solution that was neither practical nor desirable for a monarch worried about his public image in the wake of a major crisis. Parliament debated the proposals and the Privy Council reviewed them, but in the end no plan that ignored the previous property divisions was endorsed. London was rebuilt according to a pre-fire survey, with moderate improvements like widened streets and new city churches, but nothing on the scale of what Wren had proposed.

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In 1790 Washington, D.C. was selected as the site of the national capital, and in 1791 architect-engineer Pierre Charles L’Enfant established the plan of the federal city. The New York City commissioners inevitably considered this landmark plan of only twenty years earlier and purposefully chose to reject it as a model. While their “Remarks” refer explicitly only to Paris and London, there was an implied contrast between their vision of New York, with rectangular house lots, and the capital city, designed for government and the representation of power. In L’Enfant’s plan an orthogonal grid is overlaid with a larger-scale grid of diagonal streets punctuated by frequent squares. The intersections of the two grids produced non-rectangular lots that added to the cost and complexity of construction, complications the commissioners wished to avoid. But an advantage of the plan of Washington is that it creates opportunities for buildings to call attention to themselves in the urban fabric. Monuments could be sited at the end of a vista, such as the Capitol, or face a square, such as the White House, whereas in New York individual structures were submerged in the overall unity of the street and block. The plans to rebuild London after the Great Fire demonstrate the widely held belief that a great city should incorporate figural space like open squares into the street grid. In rejecting this idea for Manhattan, the commissioners of the 1811 plan departed from the Baroque model that had been used to design the new capital city of Washington, D.C. only a decade earlier. The commissioners also demonstrated the boldness of their vision by successfully implementing their plan. Whereas the Crown was unwilling to change property lines to lay out a new city, the Manhattan commissioners accepted that task.
How Manhattan’s Topography Changed and Stayed the Same

Most historical accounts suggest that the grid plan dramatically transformed Manhattan’s topography over the course of the past two centuries. Many areas of the island’s early topography have been observed, who would have cut down the seven hills of Rome.” The topographical change that resulted from the Commissioners’ Plan were nowhere more evident than in the view shown here of the northward path of Second Avenue on Manhattan’s East Side. RB

32. A house “in the air”

Figure 52. Egbert L. Viele, View of 2nd Ave. Looking up from 42nd St., 1861. Lithograph. Museum of the City of New York, Gift of Mrs. Wendell T. Bush, 28.153.215

32. Grading Eighth Avenue

Figure 53. The New-York Historical Society, #55940

33. Opening Streets

Figure 54. Greenwich Village, looking from 6th Ave toward 10th Ave. Lithograph, 1867. Museum of the City of New York, Gift of Mrs. Wendell T. Bush, 28.153.215

紐約市的高層建築物，它們的基礎是建在岩盤上，岩盤的形狀和位置會隨著時間而變化。這種變化體現了紐約市地理環境的不確定性。
Issachar Cozzens, in his *Geological History of Manhattan or New York Island* of 1843, described the challenges the graders faced in opening the streets: “the Diluvium is a tough cement of clay, gravel, and boulders, very hard to dig. In digging through 42nd Street, the pickaxes had to be used for every shovelful of this clayey cement which formed what is called, a hard-pan, of about fourteen or more feet in thickness.”

Bedrock that could not be cleared by shovel and pickaxe often required gunpowder to remove. In these photographs by Robert Bracklow (1849–1919), a team of laborers uses a system of pulleys and winches to pull large rocks from a site at 81st Street and Ninth Avenue, near where the American Museum of Natural History stands today. Horse-drawn carts would drag away the rubble, which then could be used as building material or to fill in swamps and valleys. By this time, the Department of Public Works employed over one thousand laborers.
The grid has no center. Older European cities do, of course, and you find them by following the signs that say centre ville or centro citta. There you will typically find a broad, serene pedestrian space, often demarcated by an ancient cathedral and the old city hall. If you asked a New Yorker for directions to “the center of town,” he would be bewildered, and might, for want of better, send you to Times Square, or Columbus Circle, which are merely nodal points that New Yorkers pass through, often at their peril. For this, we have Manhattan’s original city planners to thank.

Is “thank” the right word? Paris is charming, Vienna is charming — even Washington, D.C. is charming. Manhattan is not. The very word “square,” so pleasing elsewhere, in Manhattan means “place where Broadway diagonally crosses an avenue.” In 1925 the essayist Benjamin de Casseres described Times Square as “a ganglion of streets that fuses into a traffic cop.” So the question we must ask when we think about what those planners of 1811 wrought is: How do we feel about charming? How do we feel about living in a city without a center?

I guess the right answer would be “proud.” Manhattan is a remorseless place to which its citizens are peculiarly adapted, and of which out-of-towners seem unaccountably fond. It was designed that way: In their report, the commissioners of the 1811 plan noted rather scornfully that they had eschewed the “circles, ovals and stars which certainly embellish a plan” in favor of “convenience and utility.” I would never say that what I love about New York is its “utility,” but I would say that the utilitarian street plan has made possible the helter-skelter, pell-mell life of the city — which is what I do love.

James Traub
Reflection

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Central Park

98. Randel Farm Map: future site of Central Park
Randel Farm Map no. 53, vol. 3, p. 19, showing Randel Farm Map no. 53, vol. 3, p. 15, showing 101st to 109th Streets from Sixth Avenue to Ninth Avenue, June 15, 1819. Pen and ink with watercolor on paper. (Used with permission of the City of New York and the Office of the Manhattan Borough President)

Central Park was not part of the Commissioners’ Plans of 1811 and thus does not appear on the Randel Farm Maps of northern Manhattan. Instead, the proposed street grid covers the entire area, including the two columns of blocks on the right side of the sheet that are bounded by Sixth, Seventh, and Eighth Avenues. These blocks were never built because this section of the grid became the northwest corner of the park. At the top of the sheet, a square building can be seen near the proposed intersection of Seventh Avenue and 109th Street. Known as Blockhouse No.1, this stone fortification was constructed during the War of 1812 as part of Manhattan’s defenses against the British; today it is the oldest building in the park.

On the left of the sheet, the blocks bounded by Eighth and Ninth Avenues were eventually built without regard to the irregular terrain and the previous property divisions that the map records.

99. Greensward Plan for Central Park
Frederick Law Olmsted and Calvert Vaux, Greensward Plan, 1858. Pen and ink on paper. (New York City Department of Parks, The Arsenal)
In 1853 the city used an act of eminent domain to acquire the land in the center of Manhattan for the creation of a public park. Frederick Law Olmsted and Calvert Vaux won the competition to design the new park with a proposal that erased the 1811 grid and replaced it with a more relaxed grid of gently curving roads and paths. This system connects to the surrounding 1811 street grid at regular intervals around the perimeter of the park, allowing for continuous travel from one side of the city to the other. The Greensward Plan offers an escape from the grid but it does not ignore it.

Figure 98.

Figure 99.

The Public Realm
When construction began on Olmsted and Vaux’s plan for Central Park, the population of Manhattan was concentrated downtown and the grid’s northern reaches remained a projection. “The time will come when New York will be built up,” Olmsted observed then, “when all the grading and filling will be done, and when the picturesque-ruined, rocky formations of the Island will have been converted into forests of commodious, straight streets, and piles of erect buildings.” In this 1864 view of Central Park from the southeast corner entrance, the conversion that Olmsted foresaw had begun only on the east side, where the terrain was flatter than on the west side. Already buildings line the edges of the blocks along Fifth Avenue, while the streets have not yet been cut through the west side hills. Despite the lack of uptown residents, Olmsted anticipated that since the street grid eventually filled out, property near the park would increase in value, and he defended the park size on these grounds. When the construction of the grid was complete, Olmsted expected that an “artificial wall, twice as high as the Great Wall of China, composed of urban buildings” would circle the park. By the year of this view, it had started to rise. 

Pieced together from one hundred aerial photographs, this eight-foot-long photomosaic of Manhattan demonstrates the foresight of the Central Park commissioners in reserving such a long swath of the grid for public use at a time when most of the land around that swath remained undeveloped. Taken on August 4, 1921, by Lewis McSpaden for the Fairchild Aerial Camera Corporation, this composite reveals how by the early twentieth century, Central Park had become an 843-acre oasis on an island with little other open space, its terrain sealed off from the rest of the city by a continuous street wall of buildings. Although the site was chosen for the park in part because the rocky land there was cheaper to acquire and more difficult to develop than in the other neighborhoods initially proposed, the park’s location in the middle of the island offers a practical symmetry, as it provides equal access from both the east and west sides.

In his remarks on the plan for Central Park, Olmsted wrote that the most difficult problem facing the park designers was how to incorporate a transportation system into the landscape: “How to obtain simply the required amount of room for this purpose, without making this class of its constructions everywhere disagreeably conspicuous, sharply disruptive of all relations of composition between natural landscape elements on their opposite borders, and without the absolute destruction of many valuable topographical features.” Olmsted and Vaux’s solution separated circulation according to means of locomotion, with carriage roads, equestrian paths, and pedestrian walks organized into independent systems so that travelers on foot could move safely throughout the park without crossing paths with horses and caryriages. In addition, four sunken transverse roads were cut into the earth, allowing traffic on the street grid to pass through the park without interrupting the landscape.

Over forty bridges were built to separate the circulation systems vertically from each other. In this photograph of Willowdell Arch, the men who helped create Central Park—including Andrew H. Green on the far left, Vaux third from the left, and Olmsted on the far right—stand on a larger road, East Drive, at the point near 67th Street where it passes over a smaller pedestrian path. These crossing points demonstrate how Olmsted and Vaux developed an alternate transportation grid for Central Park: a grid without intersections. 

The Public Realm 101

The Greatest Grid 120
Outcroppings

147. Amsterdam Avenue and 123rd Street

James Reuel Smith, View of the southwest corner of Amsterdam Avenue and 123rd Street, November 16, 1898. Collection of The New-York Historical Society, #84700d

As the street graders continued north above Central Park, development of the blocks followed. This view of the intersection of Amsterdam Avenue and 123rd Street shows the convergence of new and old, the ground, Amsterdam Avenue already has stone pavers and streetcar tracks. Smith noted that the “lead immediately round the spring is thirty feet below the present level of the street and Avenue but at being rapidly filled in and built upon. On a high bluff to the west of it is a cottage built six-five years ago, which is one of the oldest dwellings now left standing in Manhattanville.” The newly graded streets brought more residents to the neighborhood, and within twenty years these farmhouses had been replaced by apartment buildings.

148. Riverside Drive between 123rd and 124th Streets

Katherine Rockholt, View between 123rd and 124th Streets, October 19, 1917. Collection of the City of New York, Prints and Photographs Collection, X2010.11.3102

The ridge culminates at the island’s highest point, a schist outcropping 265 feet above sea level, located in Bennett Park. Nearby a schist outcropping, a 50-foot-wide sea level, located in Bennett Park. Nearby a schist outcropping, a 50-foot-wide rock ledge that stands atop this rock spur that spanned the block, off the street grid, remains.

149. 93rd to 94th Streets between Amsterdam Avenue and Riverside Drive

A long ridge of rocky hills lies parallel to the river, crossed by few east-west streets. Certain blocks of the 1811 grid retain their rock outcropping despite having been developed. Built over a schist formation, P.S. 36 stands atop the rock on concrete footings. Completed in 1967 to the designs of Frederick G. Frank, Jr. and Associates, the elementary school consists of four buildings. Owners of the individual lots on these blocks filled with apartment buildings.

150. Amsterdam Avenue at 123rd Street

Caleb Smith, Rock outcropping on Bennett Avenue between 181st and 182nd Streets, 2006. Digital photograph

Digital photograph: Courtesy of the photographer

On the west side of northern Manhattan, topography takes over from the street grid. A long ridge of rocky hills parallel to the river, crossed by few east-west streets. This rock outcropping at 265 feet above sea level, located in Bennett Park, Study at Bennett Avenue, this photograph shows a lot north of 181st Street that is occupied by another schist outcropping, a 10-foot-wide rock ledge.

151. Bennett Avenue between 181st and 186th Streets

Caleb Smith, Bennett Avenue between 181st and 186th Streets, 2006. Digital photograph

Digital photograph: Courtesy of the photographer

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Improving the West Side

152. THE GREATEST GRID

On the right in the photograph, 124th Street has recently been graded, while in the foreground, Amsterdam Avenue already has stone pavers and streetcar tracks. Smith observed that “land immediately round the spring is thirty feet below the present level of the street and Avenue but at being rapidly filled in and built upon. On a high bluff to the west of it is a cottage built six-five years ago, which is one of the oldest dwellings now left standing in Manhattanville.” The newly graded streets brought more residents to the neighborhood, and within twenty years these farmhouses had been replaced by apartment buildings.

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The ridge culminates at the island’s highest point, a schist outcropping 265 feet above sea level, located in Bennett Park. Nearby a schist outcropping, a 50-foot-wide rock ledge that stands atop this rock spur that spanned the block, off the street grid, remains.

154. Brookside Drive between 93rd and 94th Streets

Katherine Rockholt, Brookside Drive, 1914. Collection of the City of New York, Prints and Photographs Collection, X2010.11.3102

Street grading often required so much excavation that it lowered the level of the street to well below the level of the adjacent blocks. Owners of the individual lots on these blocks were responsible for clearing and leveling their land, but they were not required to do so. In 1986, Janine Brazil Smith described what happened when East 78th Street was cut through the high bluffs near the property of a Dutch farmer named Mr. Fuer, whose land has sheared off the rock’s northern side. Although this rock was eventually demolished, the outcropings in nearby Riverside Park, off the street grid, remain.

155. Certain blocks of the 1811 grid retain their rock outcropping despite having been developed. Built over a schist formation, P.S. 36 stands atop the rock on concrete footings. Completed in 1967 to the designs of Frederick G. Frank, Jr. and Associates, the elementary school consists of four buildings. Owners of the individual lots on these blocks filled with apartment buildings.

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167. Certain blocks of the 1811 grid retain their rock outcropping despite having been developed. Built over a schist formation, P.S. 36 stands atop the rock on concrete footings. Completed in 1967 to the designs of Frederick G. Frank, Jr. and Associates, the elementary school consists of four buildings. Owners of the individual lots on these blocks filled with apartment buildings.

168. On the west side of northern Manhattan, topography takes over from the street grid. A long ridge of rocky hills parallel to the river, crossed by few east-west streets. This rock outcropping at 265 feet above sea level, located in Bennett Park, Study at Bennett Avenue, this photograph shows a lot north of 181st Street that is occupied by another schist outcropping, a 10-foot-wide rock ledge.
If the construction of the Manhattan grid is a nineteenth-century story, the twentieth century secular tells of the grid’s encroachment and intrusion. Although the minutes of the 1811 plan had been erased by exceptions like Central Park, technological advances in the new century exaggerated the grid, as skyscrapers climbed higher with the help of steel skeletons and passenger elevators, and developers sought to maximize their land values by building out to the full permitted height. Critics of the grid continued to fight this density with wholesale urban reforms, replacing existing streets with giant grids with superblocks beginning in the 1910s. Two major zoning laws formalized long-standing complaints about the grid’s density and lack of open space, and one of these, the 1916 Zoning Resolution, ultimately sought to undermine its defining qualities: the continuity of the street wall, the uniformity of the rectilinear pattern, and the density of building coverage.

Hermann Bollmann’s 1962 drawing of Manhattan (see Figure 177) highlights how the three-dimensional grid of the city is formed from individual buildings. The view demonstrates that the integrity of each rectangular block depends on the height of the buildings that stand at its edge, and shows how the Midtown skyscrapers maximize that edge virtually as well as horizontally on the lot surface. In the early twentieth century, this combination of height and bulk worried urban reformers, who reserved a portion of their lots for public space with the help of steel skeletons and passenger elevators, and developers took advantage of the legislation by prohibitive expense and logistically complicated to clear whole tracts of land for tower-in-the-park housing projects, which were endorsed by many housing reform advocates as preferable to block-based tenements. Robert Moses, for example, pursued a decades-long program of slum clearance, replacing entire neighborhoods with superblocks under the banner of urban renewal. Although the sections of street from the plan—marked a departure of the Manhattanville Houses. In changing the scale and density of the grid did not otherwise afford. These opportunities were usu-

By the 1950s, the 1916 Zoning Resolution had been qualified by so many amendments that it was no longer considered to be a useful tool for modulating the density of the grid. In 1960, the Board of Estimate passed a new zoning resolution, to become effective the following year, which replaced the old law with a set of rules designed to encourage builders to incorporate open space into their lots. Using Van der Rohe’s Seagram Building on Park Avenue as a model, the 1961 Zoning Resolution rewarded property owners who reserved a portion of their lots for open space in exchange for vertical square footage—as in the XYZ Buildings on Sixth Avenue—and mid-block arcades were created. By the end of the twentieth century, the grid had become less vulnerable to attack. The heyday of the town-in-the-park housing model had come and gone, and today the density of existing construction and high real estate values make it prohibitively expensive and logistically complicated to clear whole tracts of land for superblock projects. Instead, the prevailing trend in Manhattan has been to reassert the grid, as the recent development of Battery Park City and the current proposal to rebuild lower Manhattan demonstrate.
The Seagram Building broke with the dominant typology of the bulky step-back buildings that line Park Avenue in an unbroken street wall. Its site plan addressed the perception that the streets and sidewalks of the 1811 grid had not provided the city with sufficient open space. Although the reduced footprint of the Seagram Building meant a loss of floor area—some of which was compensated by the lower buildings to the east of the tower—the overall effect was immediately appreciated as a masterpiece of urban design. It was partly in response to this project that the 1961 Zoning Resolution offered height bonuses to buildings that incorporated open spaces at the ground level. The setback plazas that were built as a result reduced the city’s density and changed a fundamental characteristic of the grid’s three-dimensional realization.

In 1958, the same year that the architecture and urban planning firm of Voorhees Walker Smith & Smith submitted its new zoning proposal to the New York City Planning Commission, the Seagram Building on Park Avenue was completed to the designs of Ludwig Mies van der Rohe. The Voorhees proposal, which was the basis for the 1961 Zoning Resolution, cited the Seagram Building as a model for its radical new approach to massing and site planning. Instead of maximizing the building footprint by extending it to the edges of the lot, Mies had opted for a slender tower set back from the street on a landscaped plaza. By preserving this open space at ground level, the Seagram Building broke with the dominant typology of the bulky step-back buildings that line Park Avenue in an unbroken street wall. It also addressed the perception that the streets and sidewalks of the 1811 grid had not provided the city with sufficient open space.

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Grand Army Plaza at the south-eastern tip of Central Park at Fifth Avenue. Along with the Sherry-Netherland Hotel to the north, the Squibb Building, Bergdorf Goodman, and the Paris Theater to the south, and the Plaza Hotel, these buildings filled in the street wall around the Carrère and Hastings–designed pedestrian plaza, which opens to the park on its north side. Built by McKim, Mead & White in 1927, the Savoy Plaza Hotel fronted on Fifth Avenue with a line of retail shops at its base, concentrating activity at the street while contributing to the sense of enclosure within the central square.

That enclosure was broken when the General Motors Building replaced the Savoy Plaza in 1968. Edward Durell Stone, working with Emery Roth & Sons as the associated architects, pulled the new skyscraper back from the street perimeter and sank another plaza, below street level, into the space along Fifth Avenue. The addition of this public space gave General Motors a height bonus for its tower under the 1961 Zoning Resolution, but critics of the design remarked that in addition to being redundant with the Grand Army Plaza immediately adjacent, the sunken plaza was difficult to access and remained unused for much of the year. One of those critics was Donald Trump, who filled in the plaza when he bought the General Motors Building in 1998; the glass cube of the Apple Store now marks its former spot. Designed by Bohlin Cywinski Jackson and built in 2006, the cube restores a small fragment of the lost street wall. CY

Like the Seagram Building which inspired the change in the zoning law, the XYZ buildings are rectangular slabs anchored by lower buildings in the rear with open plazas in the front. Yet unlike their predecessor, these plazas are not isolated interruptions in the street wall, but are linked sequences that enclose that plane entirely. This places a greater emphasis on the street over the private, and diminishes the perception of the grid at the ground level. CY

Figure 190. General Motors Building, Fifth Avenue between 58th and 59th Streets, 1968. General Motors LLC. Used with permission, GM Media Archives

Until its demolition in 1964, the Savoy Plaza Hotel formed part of the ring of buildings framing Grand Army Plaza at the north-eastern tip of Central Park at Fifth Avenue. Along with the Sherry-Netherland Hotel to the north, the Squibb Building, Bergdorf Goodman, and the Paris Theater to the south, and the Plaza Hotel, these buildings filled in the street wall around the Carrère and Hastings–designed pedestrian plaza, which opens to the park on its north side. Built by McKim, Mead & White in 1927, the Savoy Plaza Hotel fronted on Fifth Avenue with a line of retail shops at its base, concentrating activity at the street while contributing to the sense of enclosure within the central square. That enclosure was broken when the General Motors Building replaced the Savoy Plaza in 1968. Edward Durell Stone, working with Emery Roth & Sons as the associated architects, pulled the new skyscraper back from the street perimeter and sank another plaza, below street level, into the space along Fifth Avenue. The addition of this public space gave General Motors a height bonus for its tower under the 1961 Zoning Resolution, but critics of the design remarked that in addition to being redundant with the Grand Army Plaza immediately adjacent, the sunken plaza was difficult to access and remained unused for much of the year. One of those critics was Donald Trump, who filled in the plaza when he bought the General Motors Building in 1998; the glass cube of the Apple Store now marks its former spot. Designed by Bohlin Cywinski Jackson and built in 2006, the cube restores a small fragment of the lost street wall. CY

Figure 190.
The 1961 Zoning Resolution had its greatest effect in midtown Manhattan, where the economic incentive was strongest for developers to build public spaces. The cumulative effects of the midblock arcades and plazas have been significant and affect circulation on the street grid. The ad hoc alignment of an area intended for public use was contemporized by the improved street grid and thus resulted in a steady erosion of the public-oriented interventions. CY Jerold S. Kayden.

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Vibrant street life is integral to New York City’s identity. The rectilinear Manhattan street grid, adopted in large parts of the other boroughs as well, is the city’s armature for sustaining a pedestrian-focused, walkable city, infused with energy and vitality.

The Commissioners’ Plan of 1811 created 200-foot-long blocks, just short enough to provide continuous diversity for the pedestrian. Coupled with the tradition of framing the grid by building to the street-wall, the pedestrian experience is enhanced by ensuring that all buildings are connected to the street and the life of the city.

The street walls, short blocks, and easy orientation made possible by the grid give New Yorkers and out-of-towners alike the incentive to explore the city with confidence. While fine-grained at human scale, the grid also opens up elongated vistas at the city scale, with majestic views up and down the avenues. As New York reconnects to its waterfront and its water, the grid meets the rivers without interruption, providing a corridor of light and air for the metropolis and unobstructed views to the water.

The grid was also a logical device to maximize real estate value by creating regular, geometric parcels to accommodate the city’s growth. Recent master plans such as that for Battery Park City have recognized these virtues and rejected the isolation created by the superblocks of previous decades, demonstrating the enduring logic and practicality of the 1811 plan.

For the last nine years, our agenda at City Planning has been to build on the strengths of the grid. By requiring a variety of measures, including street tree plantings, restricting curb cuts, promoting sidewalk cafes, and requiring ground-floor transparency, we strive to improve the dynamic quality of the city’s street life for today’s and future generations.

Amanda M. Burden
Reflection

This plan was often criticized for the remote conditions it created at the street level, as the vast site was difficult for pedestrians to access. The seven buildings on the superblock were isolated on wide plazas, and an underground shopping concourse drew activity away from the street.

The current plan for the redevelopment of lower Manhattan proposes to knit much of the former World Trade Center superblock back into the surrounding street grid. Two of the street axioms will be reopened to traffic: the north-south axis of Greenwich Street and the east-west axis of Fulton Street. In addition, Boy and Cortland Streets will also be extended as pedestrian walkways across the eastern half of the site. This proposal reasserts the grid as the primary circulation network in lower Manhattan and initiates a turn away from the superblock strategy that dominated urban planning in the 1960s and 1970s. It demonstrates a renewed faith in the Manhattan vernacular street and in the success of the 1811 grid. CY

In the original plans for Battery Park City, the 92-acre landfill site along the western edge of lower Manhattan had no street grid. A continuous megastructure of buildings was to cover the area, connected by a central spine of vertically-stacked decks and overhead walkways. The plan from 1969 proposed a neighborhood conceived in opposition to the city across West Street, with buildings arranged in pinwheels. (see Figure 199) By 1971, the development of Battery Park City had slowed, and a new master plan was designed to attract investors. The revised plan by Alexander Cooper Associates explicitly cited the 1811 Manhattan grid as the model for the redesign, as this proven to be remarkably adaptable to modern building and transportation technology.

The 1979 plan for Battery Park City continued the grid of lower Manhattan across West Street, in hopes that the street extensions would reduce the sense of isolation in the new neighborhood. Regular blocks replace the megastructure, whose circulation system of stacked decks was deemed too complicated and expensive to implement. Instead, the new plan was organized around traditional streets, which emphasize ground-level circulation and offer land parcels with street frontage to remain the basic unit of development. The 1979 master plan urges that Battery Park City should take a less idiosyncratic, more recognizable, and more understandable form; the form the planners chose was the 1811 grid. CY

102 THE GREATEST GRID
Although the commissioners’ plan created the Manhattan grid by delineating only two elements, the streets and the blocks, the grid affects almost every aspect of urban life. On paper, the plan defined the surface of the city—the widths of the streets and the edges of the lots—but in reality, its orthogonal structure governs everything that occurs on, above, and below that surface as well. Infrastructure and architecture make the grid; utilities, transportation networks, and social patterns follow it.

Because the grid is so rigid, it shaped the development of the area. The plan defined the width of the streets and the edges of the lots, but the commission imagined little about urban life above and below street level. The grid made streets permeable, and in the late 1811, when Logic and Convenience dictated that these be underground, the pattern of settlement beneath the streets—telegraph and telephone wires, electricity cables, and pipes for gas and steam—respected it as well.

Because the grid up to 155th Street was laid out over a relatively unpopulated area, the systems that support the metropolis developed in tandem with the grid and assumed its shape. Communications systems, power supply, and train lines initially were all above ground until the late 19th century, when logic and convenience dictated that these be buried underneath the city. The physical armature that had respected the pattern of settlement at street level—telegraph and telephone wires, electricity cables, and pipes for gas and steam—respected it underground as well. This armature included the tubes for subways, which generally followed the paths of the streets, like the avenues that the subways replaced. The first subway, the Interborough Rapid Transit Company (IRT), ran north from City Hall, for the most part underneath Broadway. The subway continued underneath Broadway and Seventh Avenue on the west side of Central Park, and on the East Side it followed Lexington Avenue. The two lines were connected in midtown by the 42nd Street shuttle.

Subterranean trains echo the grid underground; the rest of the transportation network echoes it at street level. Because of the original emphasis on waterfront access, the grid provided many more crosstown streets and travel up and down the island was concentrated on relatively few avenues. In 1949 the Department of Traffic Engineering developed the one-way traffic system in part to address the limited capacity of the avenues and make north-south transit more efficient, and an automated traffic light system was designed to allow traffic to move through several intersections without stopping.

Today it seems a given that vehicles in Manhattan should obey rectilinear traffic patterns, but this was not always the case. At Columbus Circle, which was built in 1905, the streets connect through a rotary, and in 1920 the pioneering traffic engineer William Phelps Eno proposed building similar circular intersections throughout the city. His plan was never instituted, and most New York intersections now employ a “block system,” where one street of traffic stops to allow another street of traffic to pass. Cornering throughout the world, the use of the block system in Manhattan means that vehicles rarely deviate from the path of the grid. That regularity results both in greater efficiency, with traffic lights that change according to algorithms, and in one-way streets that alternate directions and, in some cases, the grid itself; the traffic signalizations known as gridlock. The grid, however, is also a diffusion system, presenting drivers and pedestrians with alternative routes when a street is backed up.

Not just vehicular traffic, but pedestrians, too, are obliged to follow the grid. The area designated for them, the sidewalk, connects the streets and buildings of the grid spatially and is legally associated with both: though owned by the city, the sidewalk is used and maintained by property owners. For their safety when crossing streets, pedestrians on sidewalks must follow the same governing vehicle laws as at least in theory (New Yorkers are famous for jaywalking). Sidewalks are not only a transit point to get from point A to point B; they provide a space for social activity, and corners especially are natural gathering places. Jane Jacobs, champion of streets as social space, preferred shorter blocks than the ones created by the 1811 plan; more intersections mean more corners, and more opportunities to jaywalk. The zoning laws of 1961 incentivized the creation of mid-block pedestrian crosswalks to shorten the block dimensions, but relatively few of them are located on long West Side blocks.

For pedestrians moving through neighborhoods, the grid’s regular numbering system—an opposite of named streets—makes it easy to navigate, and the distances between the blocks allows walkers to calculate travel time with simple rules of thumb: twenty short blocks to a mile, one block a minute. The grid is not just the physical fabric of the city, the grid also is a systems and people moving through it.
Street Life

212. Parade of the Street Cleaners

The Department of Street Cleaning, created in 1867, was responsible for the sanitation of the city’s streets. By the late 19th century, the city was employing more than 1,000 men to clean the streets. The department was led by a superintendent, who in turn was responsible for the cleaning of the city’s streets. The superintendent was assisted by a team of assistant superintendents, who were responsible for the cleaning of specific streets or neighborhoods. The department was also responsible for the maintenance of the city’s sidewalks, which were considered to be an integral part of the street system. The sidewalks were designed to provide a safe and comfortable space for pedestrians, and they were an important component of the city’s urban fabric.

As the development of the grid advanced in the late 19th century, the city’s streets became an increasingly public problem. In 1879, the city’s Board of Aldermen passed an ordinance requiring the payment of “street cleaner” taxes by property owners to fund the cost of street cleaning. This was followed by a 1881 law that set specific requirements for the maintenance of sidewalks, including the presence of a sidewalk in front of every building and the requirement that sidewalks be at least ten feet wide.

213. Cleaning the Sidewalk


Public safety can be a problem on the grid, not only in the streets but also in the sidewalks. As the city’s population grew, so did the number of pedestrians. The sidewalks were an important component of the city’s urban fabric, providing a space for pedestrians to walk, sit, and socialize. However, the sidewalks were also subject to a range of problems, including littering, graffiti, and the illegal sale of goods. To address these issues, the city’s Department of Street Cleaning was responsible for the maintenance of the sidewalks, including the removal of litter and the enforcement of the city’s laws regarding the use of the sidewalks.

Sidewalks

Sidewalks are the invisible third element of the Manhattan grid. They are a feature of the grid that is not immediately apparent from a distance, but are essential to the city’s urban fabric. The sidewalks are an important feature of the grid, providing a space for pedestrians to walk, sit, and socialize. They are also an essential component of the city’s urban transportation system, providing a route for pedestrians to walk to work, shop, and travel around the city.

Thus the property lines of the 1811 grid determined not only the spatial aspects of the Manhattan sidewalk, but also its functional role. The sidewalks were an integral part of the city’s urban fabric, providing a space for pedestrians to walk, sit, and socialize. They were also an essential component of the city’s urban transportation system, providing a route for pedestrians to walk to work, shop, and travel around the city.
On January 15, 1887, the five-mile-long Central Park Avenue became “the general thruway in which all the promenaders met, whether the route be the Avenue, or Madison Avenue or upper Fifth Avenue.” Such scenes are captured in protective grid sympathy by the House of Morgan, published in 1905 and set in the second quarter of the century. New York, where the heroine, Lily Bart, observes the social interaction of the sidewalk as they play out along Fifth Avenue. Occasionally Lily’s time-slip narrative hints how these scenes may have struck those without the means to enjoy a five-day promenade, or when she describes the way a spring day mitigated “the ugliness of the street in the city, is the favorite promenade,” reported that “Fifth-avenue, the best cleaned street in the city, is the favorite promenade,” according to the New York Times. “are becoming quite an incident of social life.” As the fashionable crowd began to build their townhouses farther north, Central Park became an optimal place for strolling in the early morning. In this photograph of the avenue from 1898, well-dressed pedestrians pass along the avenue, and the rooflines, threw a mauve veil over the discouragingly long crowded thoroughfare, blurred the gaunt ugliness of the street traffic began on the stretch of Fifth Avenue between 55th and 56th Streets. Seven-and-a-half feet were removed from the walk’s edge sidewalk, increasing the street width from 40 to 55 feet. The reduction in the pedestrian space meant that overencroachments on the sidewalk could be made, increasing the street width of each sidewalk, increasing the street.

While traffic engineers viewed the grid’s street narrowing as a problem to overcome, Edith Wharton advised the housewife to chat, ultimately leading to social cohesion. Periods of congestion that has never abated, even as shorter blocks are better blocks. With many intersections as a problem to overcome, while traffic engineers viewed the grid’s street narrowing as a problem to overcome, as efficiently as before while nurturing different relationships on each trip. In her mind, the building blocks of Manhattan’s West Side-directed the street life and interpersonal actions one was primarily preserved. In her classic book of 1961, Jane Jacobs sought to create more of them. In her view, the corner is a valuable point of human interaction. The corner, in her mind, the building blocks of Manhattan’s West Side-directed the street life and interpersonal actions one was primarily preserved. In her classic book of 1961, Jane Jacobs sought to create more of them. In her classic book of 1961, The Death and Life of Great American Cities, Jacobs advised that shorter blocks are better blocks. With shorter streets come more intersections, and the corner, the pedestrian corollary of the intersection, creates a valuable point of human interaction. The corner, in her view, is where neighbors bump into each other or stop to chat, ultimately leading to social cohesion. In her classic book of 1961, The Death and Life of Great American Cities, Jacobs advised that shorter blocks are better blocks. With shorter streets come more intersections, and the corner, the pedestrian corollary of the intersection, creates a valuable point of human interaction. The corner, in her view, is where neighbors bump into each other or stop to chat, ultimately leading to social cohesion. In her classic book of 1961, The Death and Life of Great American Cities, Jacobs advised that shorter blocks are better blocks. With shorter streets come more intersections, and the corner, the pedestrian corollary of the intersection, creates a valuable point of human interaction. The corner, in her view, is where neighbors bump into each other or stop to chat, ultimately leading to social cohesion.
but there are also exceptional cases where different integers apply to different sections of the street, including Fifth Avenue and Broadway. For instance, Central Park West and Riverside Drive have a separate algorithm that requires dividing the building number by ten instead of twenty before adding the integer. Thus the New York Historical Society at 170 Central Park West can be found at \((170/10) + 60 = 77\)th Street.

Before smartphones made the whole system virtually obsolete, algorithms for the different avenues were printed in telephone books, in city guidebooks and maps, and on wallet-size cards to help both residents and visitors alike locate addresses on the grid.

220. Fifth Avenue Mile

Fifth Avenue Mile race, 2009.

Courtesy of New York Road Runners

“Twenty short blocks equal a mile” is an indispensable rule of thumb for judging distances in Manhattan, a convenient side benefit of the grid. In 1811, the commissioners determined that cross-town streets should be 60 feet wide and that the blocks between them should measure about 200 feet on their eastern and western sides. By that metric, twenty short blocks add up to only 5,200 feet—just short of a mile—except that the commissioners also determined that fifteen of the cross-town streets should be 100 feet wide, which supplies the extra distance. Walking at a comfortable pace and factoring in some time spent waiting for traffic lights to change, a New Yorker can expect to cover a block a minute on foot, another useful rule for estimating travel time. The record for the Fifth Avenue Mile, an annual road race that uses the twenty blocks between East 80th Street and East 60th Street as its course, is 3:47.52, set by Sydney Maree in 1981. Organized by the New York Road Runners, the event draws thousands of runners to the route along Central Park, where they measure themselves against the grid.

221. Address Calculator


In Manhattan, the grid makes it easy to locate addresses on the cross-streets, because the numbering starts at Fifth Avenue and increases as one moves east or west toward the rivers. Building numbers increase by one hundred at every long block, so the Times Square Building at 229 West 43rd Street, for example, is on the third block west of Fifth Avenue. Locating addresses on the avenues can be much more complicated. When the street grid was laid out in 1811, each avenue had a different starting point depending on how far north the city had developed in that area of the island. As a result, the numbering systems for the avenues do not align with each other, so the Empire State Building at 350 Fifth Avenue is between 33rd and 34th Streets while the same address on Seventh Avenue is between 48th and 49th Streets.

Determining the cross-street for an address on an avenue requires an algorithm. For most avenues, it is possible to take the building number, divide by 20, and then add or subtract an integer specific to that avenue and come up with the cross-street. For Lexington Avenue, the integer is 22, so to find the cross-street of the Chrysler Building at 405 Lexington Avenue, one divides 405 by 20 to get 20.25, then adds 22 for a result of 42.25: 42nd Street. Park Avenue has an integer of 35, so the cross-street of the Seagram Building at 375 Park Avenue is (375/20)+35=53.75, or 53rd Street. Most avenues have a single integer that applies to their entire length, but there are also exceptional cases where different integers apply to different sections of the street, including Fifth Avenue and Broadway. For instance, Central Park West and Riverside Drive have a separate algorithm that requires dividing the building number by ten instead of twenty before adding the integer. The New York Historical Society at 170 Central Park West can be found at \((170/10) + 60 = 77\)th Street. Before smartphones made the whole system virtually obsolete, algorithms for the different avenues were printed in telephone books, in city guidebooks and maps, and on wallet-size cards to help both residents and visitors alike locate addresses on the grid.
Manhattan’s grid imposes clarity on the island’s bubbling chaos and enables ordinary pedestrians to negotiate New York’s complex ecosystem. While many city plans are more beautiful in the abstract, none has done more to facilitate the magnificent energy of the flowing human city. The grid makes manageable the messy humanity of millions.

The grid’s costs are obvious. The plan’s regularity eliminates the surprises that pop up in older warrens of alleyways like Rome or Beacon Hill. Manhattan lacks the beautiful geometry of Barcelona’s more sophisticated plan and the impressive vistas of Haussmann’s Paris. But while the grid doesn’t celebrate the achievements of generals or architects, it provides a simple geographic framework that empowers the chaotic genius of the city. You know where you are and how to get where you are going. Even without MapQuest, you can calculate the length of your trip.

The grid encourages walking, which is important since 21 percent of Manhattanites walk to work, as opposed to 2.9 percent of Americans. The grid’s simplicity is even more important for tourists, who have enough to be confused about in Manhattan without also having to cope with a convoluted street plan.

Cities easily splinter into separate neighborhoods, small geographic areas that are places apart. Manhattan has many social divisions, but physically, the island feels remarkably connected—at least north of 14th Street. You feel that connection, in part, because you stand so often on a long avenue that runs almost the length of the island. Tenth Avenue runs from 14th Street to 190th, with only a single name change. As a teenager, I would walk home from Wall Street to 69th, almost entirely on Second Avenue.

It may not be every urban planner’s beau ideal, but as a machine for urban living, the grid is pretty perfect.

Edward Glaeser
Reflection

Figure 222. In visible Grid 69th Street plaque at the Eastbank Esplanade, 2011. Photograph by Carolyn Yerkes.

Figure 223. 69th Street and Freedom Place, 2001. Photograph by Carolyn Yerkes.

The grid helps New Yorkers navigate in some of Manhattan where its streets do not exist. Throughout the city, there are signs marking a “ghost grid,” indicating the locations where cross-streets would be, had parks, superblocks, or other alterations not interrupted them. These three photographs show signage for 69th Street in places where the street does not run. On the left, a plaque on the Eastbank Esplanade marks where the FDR Drive cuts through. On the right, a sign points to where 69th Street is erased by an Upper West Side superblock.

The prevalence of such signs—which also can be found above ground, on the High Line, and below ground, in subway tunnels—suggests the utility of the grid’s regular numbering system as a directional tool, even when independent of the grid itself. They help New Yorkers find their way around Manhattan even when the name of the street has been superimposed by changing use—consider the permanent conversion of the old High Line railyards to a park.

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CITIES EASILY SPATTER INTO SEPARATE NEIGHBORHOODS, SMALL GEOGRAPHIC AREAS THAT ARE PLACES APART. MANHATTAN HAS MANY SOCIAL DIVISIONS, BUT PHYSICALLY, THE ISLAND FEELS REMARKABLY CONNECTED—AT LEAST NORTH OF 14TH STREET. YOU FEEL THAT CONNECTION, IN PART, BECAUSE YOU STAND SO OFTEN ON A LONG AVENUE THAT RUNS ALMOST THE LENGTH OF THE ISLAND. TENTH AVENUE RUNS FROM 14TH STREET TO 190TH, WITH ONLY A SINGLE NAME CHANGE. AS A TEENAGER, I WOULD WALK HOME FROM WALL STREET TO 69TH, ALMOST ENTIRELY ON SECOND AVENUE.

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It may not be every urban planner’s beau ideal, but as a machine for urban living, the grid is pretty perfect.
As an urban plan, the 1811 grid of Manhattan looks like an abstraction, a single pattern covering a landspace from edge to edge without interruption or variation. Because that plan was a reality, built with some exceptions but in such a way that the original proposal is still readily apparent, the grid has a dual nature: it is a conceptual idea with a concrete form, a theory that can be found in practice. Manhattan differs from other gridded cities in the way that its plan reaches to the extents of the available terrain and usually ignores geographical features. It is self-contained, nearly uniform, and dense. In the two hundred years since it was first proposed, the extremity of its execution has made the 1811 plan a point of reference for architects and planners. Despite the complexity and variation of the structures that fill it out, the grid itself has nearly always been seen or felt, the diagram of the original idea remains legible. This diagrammatic quality allows Manhattan to stand in for all gridded cities, everywhere. If Manhattan did not exist, urban designers would have had to invent it, because the grid provides a paradigm for them to reject, temper, or celebrate.

Even Manhattan’s most vocal critics have had to admit its usefulness as a real-world demonstration of grid-planning brought to the limit. After his 1935 visit, Le Corbusier referred to Manhattan as “the fairy catastrophe which is the laboratory of the new times,” a statement that captures the surreal quality of a city whose built form adheres so closely to the first proposal for it on paper. Because Manhattan is a specific example that can stand in easily for a general idea, it makes the perfect punching bag for critics of grid-planning. When Le Corbusier sketched the plan of Manhattan to illustrate how, in his opinion, the density of blocks and the construction along the street walls deprives the city of open space, he needed only a few lines to capture both a real place and the total concept of its design. His own ideal city, an enlarged grid of superblocks with towers surrounded by parks, can be read as a counter-proposal to Manhattan. The extremity of Manhattan’s plan also provides an opportunity to test interventional design strategies. Architects and planners have offered a range of possible approaches to mediating the grid’s consistency. The 1811 plan simply extended the city blocks right to the water’s edge, and critics of this feature have proposed riverfront development projects in response. Those who appreciate Manhattan’s axial streets often oppose their density, and advocate incorporating more open spaces into the city. The Cornell University team’s submission to the 1967 Museum of Modern Art exhibition The New City: Architecture and Urban Renewal—a show that investigated ways to redevelop areas of New York City without clearing entire neighborhoods—employs methods for preserving the grid’s basic structure while reconfiguring the internal arrangement of buildings on the blocks. Projects like the Cornell team’s, which accept certain aspects of the grid while rejecting others, are representative of the ways designers have used Manhattan as a model to critique and reshape grid-planning without discarding its archetype. Manhattan’s grid has also been held up as a model to emulate. In 1978 in Delirious New York, Rem Koolhaas offered perhaps the best-known celebration of the 1811 plan—a manifesto that leads the plan’s general principles as well as the buildings that it produced—but others have endorsed the grid through projects that capitalize on its consistency. Works like Bernard Tschumi’s Manhattan Transcripts or the graphic novel of Paul Auster’s City of Glass use the city plan as a visual frame, enacting the grid as both a formal device and a setting for narration. For architects and artists, Manhattan offers a useful constraint for organizing ideas about urban design: graph paper instead of a blank canvas.

“I could never have imagined such a violent, such a decisive, such a simple and also such a diversified arrangement of the ground of the city,” wrote Le Corbusier in 1936, remembering the Manhattan grid from his visit to the city the year before. Invited by the Museum of Modern Art to give a lecture tour in the United States, the Swiss architect published his critique of the grid first in an article where he wondered “What Is America’s Problem?,” and then again in his book describing the entire American trip:

Quand les cathédrales étaient blanches: Voyage au pays des timides (When the Cathedrals Were White: Journey to the Land of the Timid). The titles of these publications indicate the vehemence of Le Corbusier’s reaction to New York, which he sketched out in a series of vignettes that capture his conception of the city plan and of what it should be. Although the architect admired much about the Manhattan grid, including its regularity and the spectacle of skyscrapers it produced, he considered its streets too densely spaced to support a reasonable standard of living. He proposed regrouping the streets into larger units and clearing the shorter buildings from around the skyscrapers—producing, in essence, an enlarged grid with towers surrounded by parks. He transposed the theory of urbanism that he had produced in his plan for an ideal city, La Ville radieuse of 1935, onto a real city that had developed along opposite lines. Cy

In 1967 the Department of Architecture and Design at the Museum of Modern Art launched an exhibition centered around the idea that urban renewal projects on a vast scale could address a city’s social problems. Four teams of architects and planners drawn from the faculties of Columbia, Cornell, and Princeton Universities and the Massachusetts Institute of Technology were each prompted to respond to a particular problem on a designated site. The question posed to the Cornell team asked “How can we modify the existing grid to improve circulation, encourage the development of parks and new neighborhoods, and clarify the order implied by the terrain itself?” The team responded with a proposal to blend two opposing views of city planning into one hybrid approach, on approach that both preserves and critiques the 1811 grid.

On a swath of northern Manhattan that stretches from 96th Street to 155th Street but excludes Central Park, the proposal has a central zone that maintains the street grid and two adjacent side zones that demolish it. Discrete interventions in the central zone rehabilitate existing buildings and public areas, whereas in the side zones, tower-in-the-park planning replaces the grid with newly opened park spaces, connecting Morningside Park, St. Nicholas Park, and Colonial Park into a continuous band of green. In Figure 227, the blue and white plan highlights the open spaces embedded in sixteen typical street blocks of the central zone. In Figure 228, the team proposes a strategy to reorganize such blocks by converting the private spaces,
in the street grid to its logical extreme, a regularized plan that covers an island, then Superstudio’s Continuous Monument: New York Extrusion Project finds the grid’s illogical extreme, as it extrudes the city skyline into an object that covers the world. Founded in 1966 by Adolfo Natalini and Cristiano Toraldo di Francia, Superstudio devoted itself almost entirely to theoretical projects that critiqued globalization as a homogenizing force in architecture. In the Continuous Monument of 1968—by which time Superstudio had grown to include Gian Piero Frassinelli, Alessandro Magris, and Roberto Magris—series of photocollages depicts a monolithic megastructure circling the planet, a beautiful and terrible vision of the future of urban sprawl. The New York Extrusion Project generates the form of this megastructure from the profile of Manhattan’s skyscrapers, turning the het- erogeneous architecture of the 1811 grid into a smooth glass prism—a skyline that reflects the sky.

If the Commissioners’ Plan of 1811 takes the street grid to its logical extreme, a regularized plan that covers an island, then Superstudio’s Continuous Monument: New York Extrusion Project finds the grid’s illogical extreme, as it extrudes the city skyline into an object that covers the world. Founded in 1966 by Adolfo Natalini and Cristiano Toraldo di Francia, Superstudio devoted itself almost entirely to theoretical projects that critiqued globalization as a homogenizing force in architecture. In the Continuous Monument of 1968—by which time Superstudio had grown to include Gian Piero Frassinelli, Alessandro Magris, and Roberto Magris—series of photocollages depicts a monolithic megastructure circling the planet, a beautiful and terrible vision of the future of urban sprawl. The New York Extrusion Project generates the form of this megastructure from the profile of Manhattan’s skyscrapers, turning the het- erogeneous architecture of the 1811 grid into a smooth glass prism—a skyline that reflects the sky.
The Manhattan Transcripts concludes with “The Block,” an episode that explores life within the five courtyards of a single city block. These courtyards are visible at the bottom. At the center, movement is contrasted against the formal properties of these multi-dimensioned figures. Published in 1999, The Manhattan Transcripts that was published in 1997, Tschumi describes these plays on scale rather than at the scale of individual buildings. The plans of Manhattan with and without the 1811 grid belong to a series of drawings that focus primarily on the south- east quarter of the city, where multiple-celled street system intersect and overlap. These two drawings capture both the continuity and the peculiarity of the 1811 plan by illustrating the grid as a single object—like the map of Manhattan floating free from the island of Manhattan. Elements that disrupt the grid, such as Broadway, Central Park, superblocks, and natural topographical features like the river’s edge, are shown separately in the top plan. New York is one of several cities that Tschumi describes in his book X-Urbanism: Architecture and the American City. Includes photographs by Mario Gandelsonas, MFA, The University of Texas, 1997.

232. Mario Gandelsonas


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Figure 233.