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THE SHAPING OF CHICAGO

PERRY R. DUIS

Chicago holds a special place in the history of American cities.

It frequently assumes the role of the great American exaggeration, the place where common characteristics are stretched to their limits. Other cities grew during the nineteenth century, but Chicago mushroomed. Every town had its boosters, but the Windy City's were obstreperously boastful. Crime and political corruption were everywhere, but in Chicago they seemed to be elevated to an art. More positively, Chicago became a synonym for "the new" and "the first," leading the way in architecture, literature, and social reform—in part because, as a brash upstart, it possessed few encumbering traditions.

As the archetypal American industrial city, Chicago's rise and metamorphoses not only illustrate the urbanization process at its most basic but also demonstrate how the compelling forces of concentration, which allow efficiencies of space and time to outweigh all other considerations, both attract people and activities into cities and drive them outward toward the fringes.

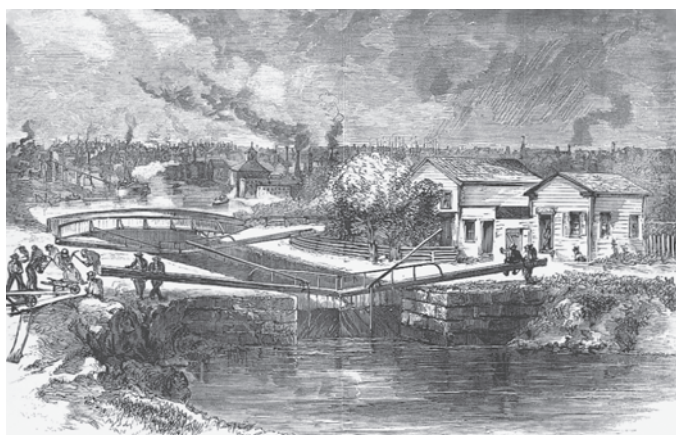
The creative efforts of talented individuals are the substance of this book. But location, challenges, opportunities, and calamities also shaped Chicago and stimulated the city's problem solvers to reach inventive solutions. Many conditions, events, and movements have shaped the city: the following are some that have had a special impact on the built environment.

The Power of Place

Chicago's location has been both a curse and a blessing. The land at the banks of the Chicago River was swampy, and the stream itself flowed too slowly to turn a waterwheel or clear the mouth of silt. But it sat at the southwestern end of the massive Great Lakes navigation system. Via these waterways, prerailroad commerce penetrated the midsection of the continent and, interrupted only by a dry-weather portage, was linked to the Mississippi and Missouri Rivers via the Illinois and Des Plaines Rivers and the south branch of the Chicago River. Its advantages made Chicago's site a spot to control. When the first outsiders, Jacques Marquette and Louis Joliet, explored the region in 1673, the warlike Potawatomi had already displaced peaceful Indian tribes. Around 1779, Jean Baptiste Point Du Sable built a cabin roughly where the Equitable Building stands today and became Chicago's first permanent resident. A French-speaking black man, Du Sable was one of many Great Lakes traders who exchanged iron and cloth goods for furs.

In 1803, the year of the Louisiana Purchase, the United States established Fort Dearborn, the nation's westernmost military post, near what is now the south end of the Michigan Ave. Bridge. In 1812, in an incident known as the Fort Dearborn Massacre, the Potawatomi attempted to regain the valuable site. They burned the stockade, while three miles to the south, a raiding party killed most of the garrison members and their families as they fled along the lakeshore.

The fort was rebuilt in 1816, the same year that surveying began for the Illinois & Michigan Canal, which would provide a year-round link between the Chicago River and the Illinois-Mississippi River system some seventy-five miles away. A national financial panic in 1819 and fears of Indian unrest halted progress until the 1830s. On August 5, 1833, thirteen electors gathered to incorporate the Town of Chicago, and newcomers, many of them land speculators, began arriving in droves. By 1836, when work on the canal began in earnest, optimism about Chicago's future had boosted land prices to astronomical levels and attracted more than three thousand additional residents. In March 1837, Chicagoans demanded and received a city charter from the state legislature.



Illinois & Michigan Canal in Bridgeport

The Golden Funnel and the Growth of Transportation

In the mid-1840s, Chicago's merchants began to exploit the city's site by creating what might be called the golden funnel. The development of farmland throughout the West produced agricultural surpluses that could be shipped to eastern markets most efficiently via Chicago's water linkage. Wheat shipped through Chicago rose from a meager few bushels in 1840 to nearly two million bushels seven years later.

In 1848, several events improved the funnel's flow. The Illinois & Michigan Canal was finally opened, plank roads to the hinterlands made it easier for farmers to roll their grain wagons into town, and the telegraph linked national and international markets to the Chicago Board of Trade, newly formed to provide a standardized, self-policing market that farmers could trust. Most significant, on October 25, 1848, a tiny locomotive named the *Pioneer* made its inaugural run between Chicago and present-day Oak Park.

The promises of the 1840s became prosperous realities in the 1850s. Rail lines extending west to the Mississippi and east to Philadelphia and New York transformed Chicago into a national transportation hub. Grain elevators now towered over the city, while huge stacks of timber along the riverbanks proved that Chicago was the nation's leading lumber center.

The Civil War ushered in a new era for Chicago. The city's size and remoteness from military action made it an ideal site for producing war goods. The golden funnel now supplied the Union Army with horses and hay and fed its troops with carloads of bread, condensed milk, dried fruit, and cans of cooked meats from Chicago slaughterhouses. So great was the movement of live-stock into the city that the need for efficiency forced packers and shippers to consolidate. On Christmas Day 1865, they opened the Union Stock Yards



Union Stock Yards entrance gate

four miles southwest of the city. The yards soon enabled Chicago to displace Cincinnati as the nation's pork-packing capital.

Dire Necessities and Creative Technologies

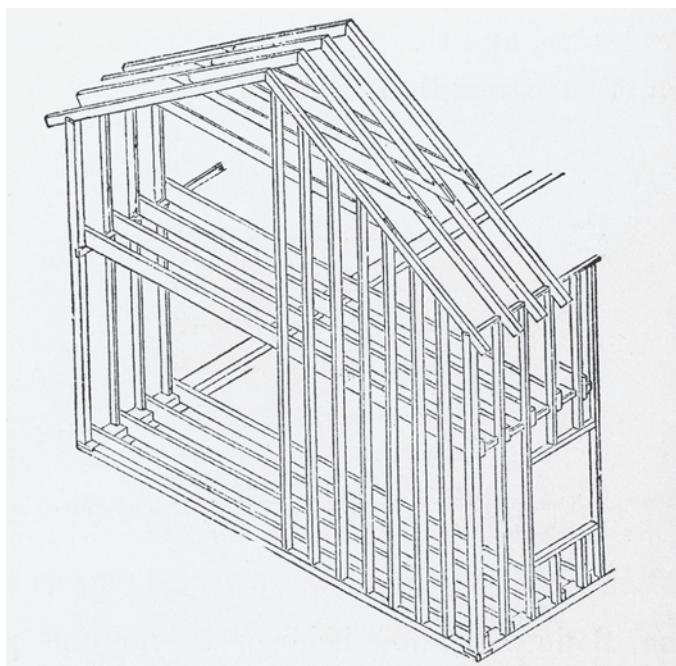
The new city offered few amenities. Depending on the season, the streets were graded dust or mud that regularly disappeared under ponds left by springtime rain. Visitors were uniformly unimpressed by the buildings. Shortages of structural wood and skilled labor led to lightweight "balloon frame" construction, invented in 1833, which resulted in housing easily built by unskilled laborers.

Only gradually did more substantial masonry structures join the tiny buildings of logs or crudely cut boards. In 1837 William B. Ogden, the city's first mayor, enticed John M. Van Osdel, a carpenter and architect, from New York to begin providing something more than an architecture of expediency.

Chicago officials also turned to engineering experts to solve problems generated by exploding growth. To combat epidemics by improving drainage flow, the city's chief engineer, Ellis S. Chesbrough, designed a sewer system to be constructed on top of the existing streets, an expensive project that began in 1855 and continued for decades. The pavement grade was then raised a dozen feet, and building owners turned to youthful talents such as George Westinghouse and George M. Pullman to jack up old structures and insert new foundations. In older neighborhoods, such as Pilsen, these raised street grades are still visible.

Public health reformers began a long crusade against unsanitary burial places in 1858. Their efforts eventually closed the city cemetery (in what is now the southern part of Lincoln Park) and increased the attractiveness of landscaped plots in rural areas. Cemeteries such as Graceland, Rosehill, and Oak Woods became accessible to city dwellers because of advances in public transportation—steam railroad commuter service, a horse-drawn street railway system, and a pivoting span bridge over the river at Rush St. (1856), touted as the first iron bridge west of the Alleghenies. Architects such as W. W. Boyington, Edward Burling, and Otis L. Wheelock joined Van Osdel as designers of specialized structures for stores, public buildings, and homes.

With heavy maritime traffic keeping bridges open almost perpetually, tunnels were excavated under the river at Washington (1869) and La Salle (1871)



"Balloon frame" construction

Sts. When pollution from the sewage-laden river threatened the water supply, engineers designed a new water plant, the Chicago Water Tower & Pumping Station (1869), with an intake crib two miles from shore.

The Great Conflagration

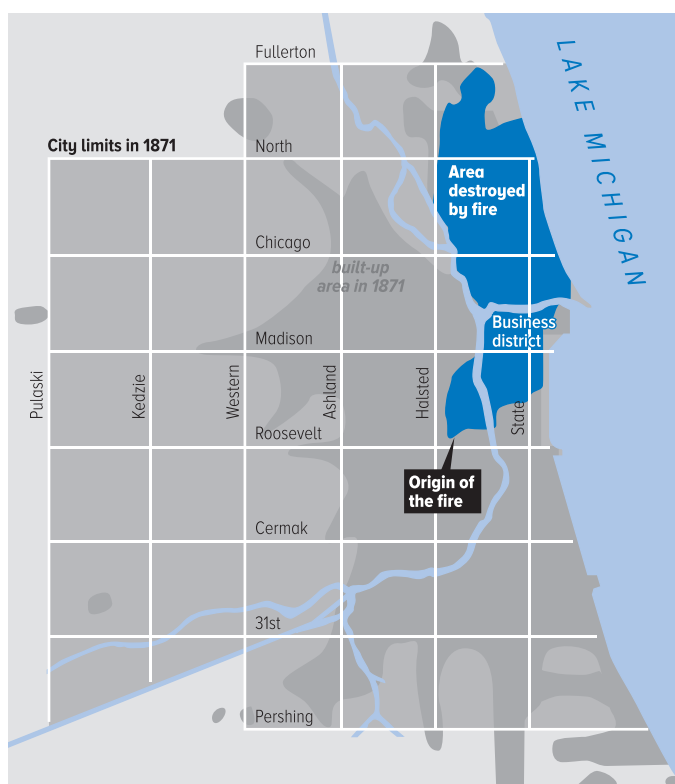
To this day, no one really knows how the fire of October 8–9, 1871, started. Whether it was lightning, raucous tenants, a drunken neighbor, or even a cantankerous cow kicking over a lantern, the blaze definitely began near the barn behind Patrick and Katherine O'Leary's DeKoven St. home. Incompetent dispatchers and lookouts allowed the fire to flare out of control, and an intense firestorm consumed block after block of a city that had had no rain since July. The conflagration raged for thirty-six hours, sweeping away a third of the city before burning itself out four miles away, on the northern edge of town. More than 300 people perished, 17,450 structures were reduced to ashes, the downtown was devastated, and on the North Side, only a few scattered houses and the Water Tower were spared. At least 90,000 people were left homeless, and the livelihoods of thousands more had disappeared, along with their workplaces.

Residential Chicago would never be the same. The Common Council soon banned any new nonmasonry construction within the city limits (roughly Fullerton Ave. on the north, Pulaski Rd. on the west, and Pershing Rd. on the south). Thousands of North Siders who could not afford to rebuild in brick were forced to sell their lots and move just over the border, where developers were only too happy to put them in inexpensive new wooden houses. The contrast between the masonry city and the wooden suburbs on the old city borders can still be seen in spots along Fullerton Ave., west of Halsted St. The undamaged South and West sides were also dramatically transformed. Owners subdivided houses near the "burnt district" and rented space at premium rates. Overcrowding quickly resulted in the deterioration of thousands of these structures and hastened inner-city decay.

Downtown faced the daunting problem of reestablishing the heart of Chicago's economic and cultural life. Rebuilding began even before the rubble cooled, and Chicagoans turned to their architects and engineers. John M. Van Osdel, Edward Burling, W. W. Boyington, Otis L. Wheelock, Gurdon P. Randall, Augustus Bauer, Asher Carter, and Peter B. Wight had as many commissions as they could handle, and for two years, as crews worked around the clock and throughout the winters, they kept track of their designs in terms of miles of building fronts constructed. The new structures appeared to be much the same as those constructed before the fire, but most were slightly taller and had more elevators. Innovations were limited to improved fireproofing techniques.



Aftermath of the fire of 1871



Map of the fire's destruction

The fire hastened the evolution of city-use patterns. Downtown residential use, which had been declining, was not reestablished, and most of the manufacturers whose North Side factories were destroyed soon relocated in outlying industrial districts along rail lines or the river's branches. The McCormick Reaper Co., for example, replaced its plant on the north bank of the river's mouth with what would eventually be one of the nation's largest manufacturing facilities (now demolished) at Western and Blue Island Aves. The new factories were generally much larger than their predecessors and housed heavier, more complex equipment. This reduced the mobility of the enterprises, and land-use patterns were thereby fixed for decades to come.

The Logic of Centralization

By 1870, the city's population had surged to 298,977, but wartime shortages of building materials and carpenters had hampered house building, and many areas were overcrowded. This congestion, aggravated by the noise and smoke of postbellum factories, instilled thoughts of escape. The middle and upper classes could choose to move to quiet, orderly sections of the city serviced by expanded horsecar lines and commuter railways. Those seeking permanent residential refuge found homes in subdivisions and suburban towns that sprang up along railroad routes.

Chicago's population exploded to 500,000 in 1880 and to more than 1,000,000 in 1890. The city had become big, and in this largeness was an overwhelming logic of concentration, of which factories were only one example. The savings of time and economies of scale that resulted from putting many departments under one roof—so that belts and pulleys from one huge stationary steam engine could drive the greatest number of machines—more than paid for the cost of building the structure. Downtowns were seen as also benefiting from economies of size and geographic convenience. Most of Chicago's public transit lines, which included the world's largest cable car system, were built to carry passengers into the central business district, which acquired the nickname the Loop in the early 1880s because it was encircled

by transit tracks. Electric trolleys went into service in 1890, and two years later, an elevated “iron highway” was inaugurated—the first of five radial rapid transit lines that would be united in 1897 by the Union Loop above the downtown’s perimeter. Steam suburban lines brought an estimated 100,000 additional daily passengers into their six depots, which also ringed the downtown.

Nineteenth-century urban residents also exercised the logic of concentration in their division of city spaces. For them, domestic dwellings were clearly private spaces, and the wealthy were better able than others to use private areas to shelter their affairs. They built their homes in exclusive districts, like Prairie Ave. on the South Side or Astor St. on the Near North, and their luxurious world of private clubs, schools, opera boxes, and carriages permitted selective contact with the rest of Chicago. Conversely, the streets, sidewalks, parks, river, and government facilities were public places—owned in common, primarily utilitarian, and usually undistinguished in design. The one great exception was Chicago’s well-landscaped parks and boulevards. In 1869, Illinois Health Board member Dr. John H. Rauch, along with real estate developers and civic boosters, persuaded voters and the Illinois General Assembly to create three tax districts to fund an ambitious ring of parks several miles beyond the built-up neighborhoods.

A third category of city space might be called semipublic places—privately owned areas to which the public had access. Some were noncommercial, such as churches, which by the 1890s were often grand buildings with Sunday school or meeting facilities at least partly available to all. Most semipublic spaces, however, were designed to generate profit, and the degree to which they had become objects of civic pride reflected the progress of urbanization and centralization. Office buildings offered one example. Although they featured private offices, they also offered barbershops, restaurants, and other services, and elevator lobbies evolved into showplaces meant to make good impressions and attract tenants. In the (now demolished) Chicago Stock Exchange Building, for example, the elevator cages were enclosed in delicate metalwork; the Marquette Building presents a Chicago history lesson in mosaic tiles; and the Rookery has an airy, naturally illuminated core.

The concentration of activities downtown encouraged the creation of districts within the Loop. The railway stations girding the central business district, for example, encouraged a similarly shaped placement of hotels for the convenience of passengers. The Chicago Board of Trade at the foot of La Salle St. drew not only brokers but also law firms, banks, and insurance companies to adjacent blocks. To the east, Marshall Field had moved his retail business from Lake St. to State St. just prior to the fire. His competitors followed, so that within months a residential area had been transformed into the city’s main mercantile district. Randolph St. emerged as Chicago’s theater row as well as the home of



The Rookery lobby by Burnham & Root

a thriving music publishing industry. Warehousing, printing, and clothing concerns located on the edges of downtown to be near suppliers and customers.

Department stores were examples of semipublic spaces designed for public use. Before the fire, merchants had offered undifferentiated varieties of wholesale and retail goods. Eventually, merchandise and services were centralized under one roof, and the stores functioned as factories of consumption that saved consumers time and steps. The store that Marshall Field built after the fire was one of America's most lavishly furnished. By the end of the century, Field had begun what would become a complex covering more than a square block on State St.; Schlesinger & Mayer had commissioned the Louis H. Sullivan Building at State and Madison Sts. (later known as the Carson Pirie Scott store); and Siegel, Cooper & Co. had fifteen acres of floor space in the Second Leiter Building. Elsewhere on That Great Street, new buildings for Maurice Rothschild, Mandel Brothers, and the Boston Store soon created a retail district of enormous drawing power. Huge plate glass windows allowed each store to display its wares to lure passersby and provided light for counters inside.

Hotels had matured from rude inns into spectacularly appointed rivals to the palaces of European nobility. They offered such specialized amenities as billiard parlors, sunrooms, and ballrooms as well as several classes of guest rooms and dining facilities. The six major railway stations near which the hotels were concentrated had in turn evolved from homely barns into spectacular urban gateways featuring so many services that they were called "cities within cities." The Auditorium, the most remarkable structure of all, combined three types of grand semipublic places. It had an office block on its Wabash Ave. side, a luxurious four-hundred-room hotel fronting on Michigan Ave., and an acoustically perfect theater, the world's largest when it opened in 1889.

In the 1890s, the battle between centralization and dispersal continued, with new factors favoring decentralization. One of these factors was the development of small electrical motors to power individual machines, which replaced the giant steam engines that had powered entire factories. This change spawned "electrical manufacturing suburbs," such as Harvey, Maywood, and Chicago Heights that had room for both new factories and cheap workers' housing. Furthermore, those who could afford spacious homes continued to migrate to the urban fringe.

Labor Unrest in the Industrial City

Raw materials continued to flow through the golden funnel to industry, and many of the new plants required only low-skilled workers who could perform repetitive jobs. Long hours and low wages fomented worker dissatisfaction, leading to an era of labor unrest and violence. The nation's attention focused on Chicago in 1886, when demands for an eight-hour workday produced a series of strikes at the McCormick works. On the night of May 4, police charged into a labor rally at Haymarket Sq., near the corner of Randolph and Desplaines Sts. A bomb exploded, and the police opened fire. What soon became known as the Haymarket Riot led to a conspiracy trial, executions, and international protests.

The self-sufficient model factory and town thirteen miles south of Chicago, begun in 1880 by George M. Pullman, epitomized the new industrial order. Architect Solon S. Beman had designed an efficient factory, workers' housing, and amenities such as a shopping arcade, stables, a market, a park, a hotel, and a church. It was hardly utopia, however. Pullman sought a sober, dependable workforce that did not have to live in the city's slums, but workers chafed under a system that isolated them from company executives and sought to control how workers lived and where they shopped. During a serious depression that began in 1893, the company slashed wages and laid off workers, but Pullman refused to lower his rents. The 1894 Pullman strike and a nationwide boycott resulted in the firebombing of Pullman's cars and occupation of his town by federal militia. Although the company won the struggle, the courts eventually forced it to sell the houses and to hire nonresidents. The Haymarket and Pullman incidents produced front-page headlines worldwide, not only



First Infantry Armory by Burnham & Root (demolished)

because they were startling but also because Chicago's economic importance and position as the nation's fastest-growing city prompted widespread concern that battles between workers and police might eventually be repeated everywhere.

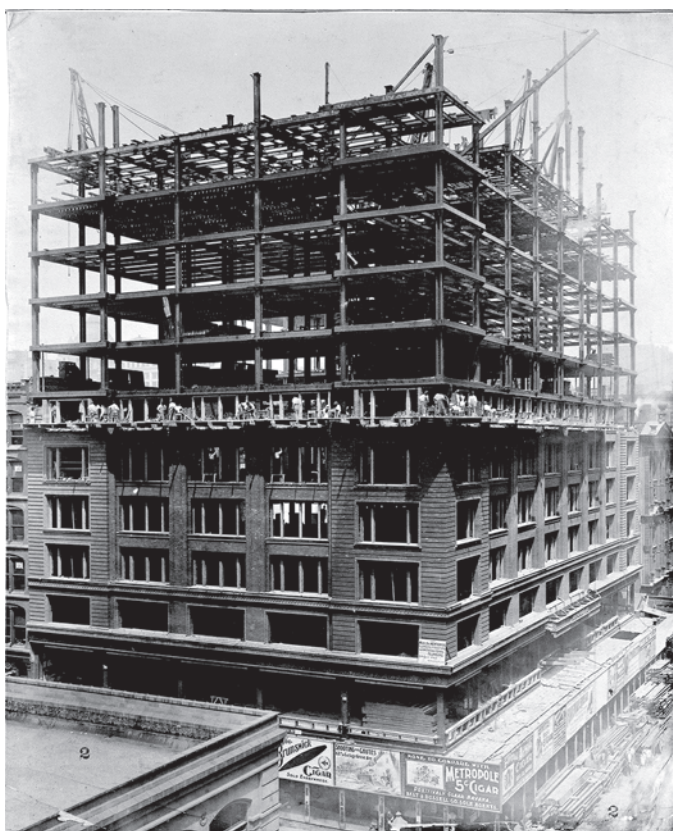
The Development of the Skyscraper

Downtown centralization required special buildings to draw together thousands of people simultaneously, and a rapid succession of technological developments made the construction of such buildings possible. Advances in foundation engineering and in metal-frame construction, reliable lighting systems (first gas, then electric), improvements in steam heating and fireproofing, and faster, safer elevators made vertical expansion possible. Soaring land values demanded the intensive use of downtown lots, just as telephone and telegraph communications were enabling business leaders to move away from their manufacturing facilities and closer to their lawyers, bankers, and other downtown services.

More than demand was required to create tall buildings, however. Chicago was blessed with a talented cadre of architects and engineers. John M. Van Osdel and Peter B. Wight were seasoned veterans among a group of varied talents. William Le Baron Jenney and William Sooy Smith concentrated on foundations and structure. Dankmar Adler, an expert in acoustics, teamed with Louis H. Sullivan, the master of detail. Daniel H. Burnham, who understood the business of architecture, formed a partnership with John Wellborn Root, who excelled in its artistry. William Holabird and Martin Roche were among the steadiest producers, with a stream of successful designs.

The architects and engineers had to find ways to secure tall buildings in Chicago's spongy soil. Initially, following suggestions from structural engineer Frederick Baumann, they designed raft foundations that spread a building's weight over as much of the subsurface soil as possible and set entrance levels high enough to compensate for expected settling. Particularly heavy or tall buildings required more substantial support. Adler & Sullivan placed the structural walls of the Auditorium on continuous reinforced concrete foundations and carried the massive weight of the seventeen-story tower on a floating raft of crisscross layers of timbers, steel rails, and I beams. In their seventeen-story Schiller Building, raft foundations were supported on wooden pilings driven to refusal; the same architects subsequently made an important breakthrough in settlement problems when they supported the west party wall of the Chicago Stock Exchange with tubular concrete caissons (the first used in Chicago) that reached fifty-five feet down to hardpan, an oxidized clay.

Framing problems also had to be resolved. The six-foot-thick walls and tiny windows of the lower floors of Burnham & Root's Monadnock Building demonstrated that extending load-bearing construction to sixteen stories limited interior space and light so severely that taller masonry projects were point-



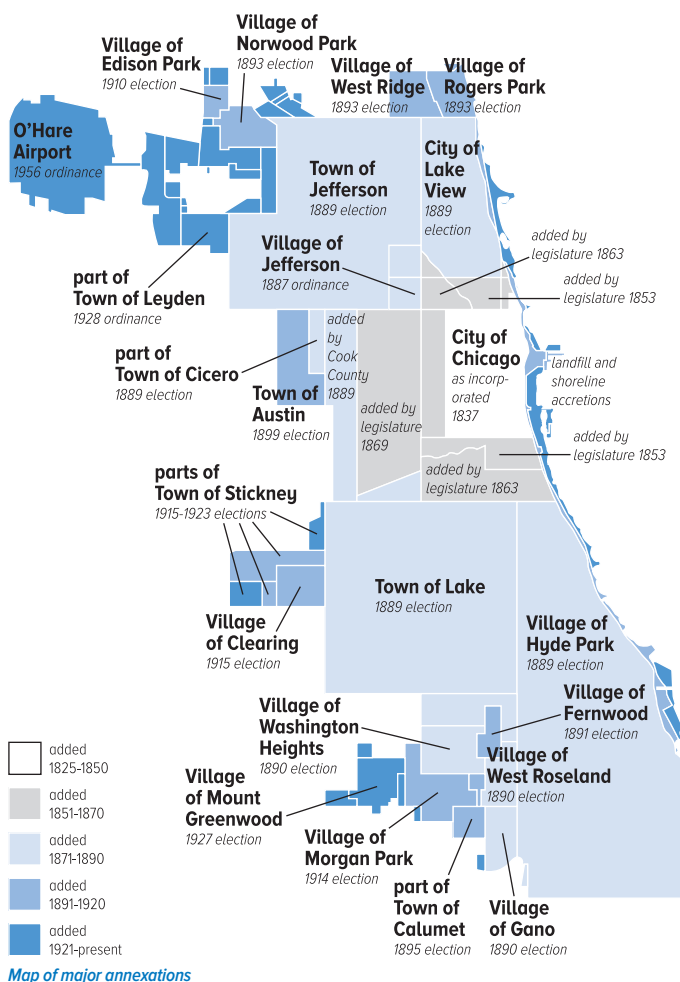
Construction of the Marquette Building

less. But a feasible way to go higher had already been worked out gradually, so that in Jenney's Home Insurance Building (1885), metal framing had eliminated the need for exterior load-bearing walls. As the construction of tall buildings evolved into all-steel structures, curtain walls came to function only as skins and could be made of almost any material, including glass or terracotta. Interiors were flooded with light through Chicago windows (bay-filling frames holding movable sashes on either side of large fixed panes). Most important, there were now almost no theoretical limits to a building's height.

Chicago's skyline altered at a dizzying pace after 1880, and what had seemed daringly tall in one decade became the norm of the next and small twenty years later. The distinction of being the city's tallest building passed quickly from the ten-story Montauk Building (1882), the first labeled a skyscraper, to the thirteen-story Royal Insurance Building (1885). The Rookery, Austin, and Adams Express Co. buildings (all eleven stories) were exceptionally large when they were built in 1886 but of only average size once the Auditorium was under way. The Monadnock, with its load-bearing walls, and the Manhattan, with its metal frame, both reached a world's-record sixteen stories in 1890. Two years later, however, they were dwarfed by the twenty-one-story Masonic Temple.

Rampant Growth and Annexation

Only a handful of cities had fewer geographical constraints on dispersal than did Chicago. The abundance of land kept down the cost of lots or factory sites, while the transportation networks that brought passengers downtown to work or shop also made it convenient for them to live great distances away. Developers aggressively marketed life on the urban fringe. They cut building costs by mass-producing limited varieties of designs, advertised their developments heavily in multiple languages, and gave away samples—weekend excursion rides to their subdivisions. Housing for every budget was available beyond Chicago's borders, while the congestion, crime, disease,



and political corruption within them made daily headlines and provided the motivation to leave.

By the 1880s, Chicago risked being rivaled by its adjacent areas, which were growing far faster than the city itself. Since its founding, Chicago had grown steadily by annexation; now, the municipal government proposed a massive annexation that would take in such communities as Hyde Park, Kenwood, and Pullman to the south and Lake View and Jefferson to the north. Many of those affected realized annexation would offer the benefits of Chicago's more advanced municipal infrastructure and better services, including schools. Others, feeling safer and morally superior to their city counterparts, earnestly wanted the status quo. Nonetheless, on June 29, 1889, suburbanites spread over 125 square miles—much of it farmland—voted by a thin majority to join with Chicago. The city's territory almost quadrupled overnight, and its population was recorded at one million in the following year's census. Among American cities, only New York was larger.

“A World of Unmixed Bliss”

The success of the annexation vote aided Chicago's efforts to become host to an international exposition being proposed to celebrate the four hundredth anniversary of the discovery of America. Not only did it help the negotiations for the host city to be as large as possible, but the best sites for the fairgrounds were now inside the city limits. The self-promotion of the delegation seeking congressional approval was so aggressive that it earned Chicago its “Windy City” nickname. A struggle at home over location ended with the commissioners' choice of Jackson Park on the South Side. An illustrious group of archi-



Palace of Fine Arts by Charles B. Atwood, World's Columbian Exposition

pects from the East Coast and Chicago, led by Daniel H. Burnham, designed an immense architectural wonderland. Workers constructed a neoclassic “White City” from steel frames finished in lath and staff (a mixture of plaster, cement, and jute).

To help the city look its best for the fair, several cultural institutions opened new buildings, including the Chicago Historical Society, the Chicago Academy of Sciences, and the Newberry Library. The Art Institute rented its new home to the exposition congresses, a series of international scholarly meetings. The realization that visitors would also note what Chicago lacked motivated the founding of the Chicago Symphony Orchestra and a second University of Chicago (the first one had gone bankrupt in 1886). The World’s Columbian Exposition opened amid a severe national depression, but as many as 750,000 visitors a day passed through the gates and found a plaster paradise in which the world’s technical knowledge, mechanical skills, and manufacturing prowess had been collected, classified, subdivided, and displayed as never before. More than a million objects filled more than a hundred buildings. No exposition before or since ever aspired to such comprehensiveness.

The exposition left Chicago with two significant legacies. First, the fair drew hundreds of talented young people to the city, and despite a persistently depressed economy that hampered the arts in general, they created an innovative cultural milieu. Experimental theaters staged avant-garde productions. Small-scale publishers and little magazines, such as the *Chap-Book*, commissioned Art Nouveau illustrations and featured works by new authors, including Theodore Dreiser and George Ade. This creative community gathered in buildings especially designed for the arts, such as the low-rent artists’ studios that Judge Lambert Tree erected in 1894 in the backyard of his N. Wabash Ave. house. The former Studebaker carriage works was remodeled by new owners in 1898 into the Fine Arts Building, housing a unique collection of studios, theaters, and music schools.

Second, Chicago’s first elevated line was built to carry visitors between the downtown and the fairgrounds, and hundreds of small hotels and apartments were built along it and other South Side transit routes. Often hastily and poorly constructed by underfinanced opportunists whom the depression bankrupted, these buildings quickly fell into disrepair. From 1900 to 1930, African Americans arriving from the South could find few housing opportunities outside this broad band of exposition housing, and the so-called Black Belt emerged.

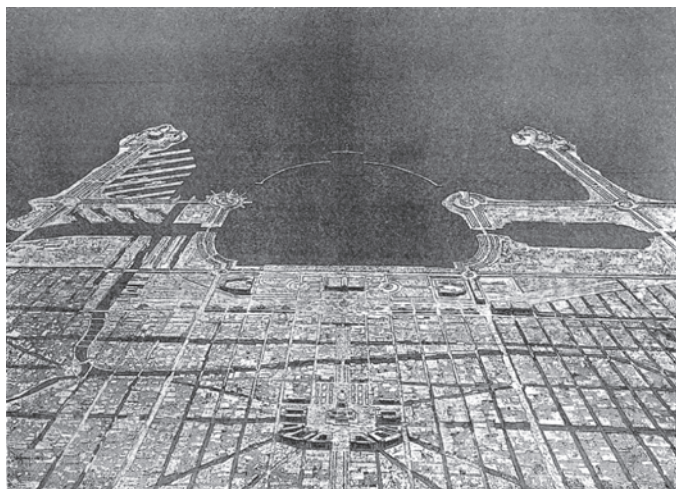
“Make Big Plans, Aim High in Hope”

By the 1890s, Chicago seemed to be choking on its own success. Each new downtown skyscraper added to traffic woes. The clatter of hoofs and metal wheels, peddlers’ shouts, and streetcar bells created an unbelievable din. Some health officials worried that the darkness of the skyscraper canyons

would turn the ubiquitous layers of horse manure and refuse into germ incubators. Finding one's way around was complicated by a house-numbering system that used the meandering river as its baseline and allowed countless duplicate addresses.

Proposals to relieve the city's woes took several forms. To reduce street congestion, the elevated system was extended, and a network of tunnels enabled miniature electric locomotives to haul freight, coal, and ashes to and from downtown buildings. (In 1992, a leak from the Chicago River flooded the long-abandoned system, causing an estimated one billion dollars in damage.) By the beginning of the new century, the extensive use of automobiles was being proposed as a solution to several ills. Their maneuverability would help relieve traffic jams involving fixed-route vehicles, they would eliminate the health hazards connected with manure and animal carcasses, and they would reduce the dense smoke from commuter trains because fewer trains would be needed. The city government also made several attempts to untangle Chicago's street chaos. The City Council voted in 1893 to limit building heights to 130 feet (though lobbyists soon persuaded the council to ease that restriction). The aldermen also renamed hundreds of streets and in 1909 instituted a rational house-numbering system with State and Madison Sts. as baselines.

The most significant proposal combined careful restructuring of the street system with strict planning for future development. Calling on his experience with the Columbian Exposition, Daniel H. Burnham and his assistant, Edward H. Bennett, backed by the Merchants' and Commercial Clubs, began work in 1906 on a master plan for the city. When published three years later, the *Plan of Chicago* presented a grand blueprint of transportation for the entire region and demonstrated how public spaces could be made as magnificent as semipublic ones. The plan reserved the lakefront for recreation and proposed a string of offshore islands. Monroe Harbor and Grant Park would become a formal "front door," while the seat of government would be relocated to an immense plaza at the junction of Congress and Halsted Sts. Burnham and Bennett took great pains to demonstrate how railroad facilities could be efficiently concentrated in outlying districts, how commercial and recreational use of the river's downtown banks could be compatible, and how attractive a city of uniform height might be. The most important feature, however, was the treatment of streets as the veins and arteries of a living organism. Impediment-free circulation required widening many streets, including Michigan Ave., designated as the new gateway to the North Side. Diagonal streets would improve crosstown travel. The plan was lavishly illustrated by artist Jules Guerin, who depicted the streets as low-density mixtures of automobiles, horse-drawn vehicles, and pedestrians to demonstrate the benefits of proper urban planning.



Jules Guerin rendering from *Plan of Chicago*

To promote Burnham's grand scheme, the Commercial Club established the Chicago Plan Commission, comprised of civic and business leaders and chaired by brewer Charles H. Wacker; Burnham served as its chief architect. The commission not only lobbied for individual projects that would conform to the plan but also campaigned intensively to sell it to the citizenry. Pamphlets on the plan blanketed the city, nickelodeon audiences found promotional movies on it sandwiched between standard features, and eighth-grade children were required to pass examinations based on *Wacker's Manual of the Plan of Chicago*, a textbook version published in 1912.

Many people objected to the plan. The Army Corps of Engineers, which was responsible for harbor development along the Lake Michigan shore, thought Chicago would be foolish to relinquish miles of potential docking facilities for recreation. The city negotiated a compromise under which Municipal (later Navy) Pier was built to combine both uses. Property owners objected to street-widening plans that destroyed their front yards or buildings. Railroads resisted consolidation. And mail-order baron A. Montgomery Ward opposed the idea of clustering public buildings in the downtown lakefront park. Ward's lawyers invoked an obscure clause in the original federal land grant that gave Michigan Ave. property owners, of which he was one, veto power over any construction there. Ward did not challenge the building of the Art Institute, but he pursued lawsuits to the Illinois Supreme Court to prevent the construction in the park of the John Crerar Library and the Field Columbian Museum.

The Burnham Plan shaped public-works construction for decades. Its success depended on a bold government that would borrow and spend on a grand scale, and William Hale "Big Bill" Thompson, who was elected mayor in 1915, was willing to do just that. Over the next eight years, Thompson began a physical transformation of the city. He enhanced the southern bank of the river with a bilevel street named in honor of Wacker and built new bridges, including the double-decker at Michigan Ave., thereby making that street a major thoroughfare on both sides of the river. Thompson also extended Ogden Ave. and Roosevelt Rd. to speed traffic across the city, and he straightened out an obtrusive bend in the Chicago River between 12th and 16th Sts.

The plan also inspired the 1923 passage of Chicago's first comprehensive zoning law, which sought to regulate both vertical and horizontal sprawl. The law replaced the rigid height limit with an elaborate formula that allowed towers above the twenty-second story provided that the structures did not occupy more than one-fourth of the area of the lot and that tower space was not more than one-sixth of the entire building. While these requirements did not help traffic problems, they slightly reduced canyon effects. The zoning law proved quite compatible with the skyscraper developments of the 1920s, a decade that witnessed an enormous building boom and the first significant appearance of tall buildings outside the Loop. The Burnham Plan made the Chicago River a focal point, and by 1929, the Merchandise Mart—the world's largest building, with more than four million square feet of floor space—was gracing the northern bank of the main branch, while the Chicago Daily News Building peered across the river at the forty-five-story Civic Opera Building, built by utilities magnate Samuel Insull. The opening of the Michigan Ave. Bridge in 1920 extended development north of the river, much as Burnham had envisioned. The dazzling white Wrigley Building was soon joined by hotels, a Northwestern University campus, and other office buildings, most notably the Tribune Tower, whose design was chosen in an international competition. A string of new apartment buildings stretched northward along Lake Shore Dr. In the Loop itself, buildings of twenty and twenty-five stories became the norm, while the 605-foot Chicago Board of Trade loomed over its neighbors.

The zoning law also not only protected property values in built-up areas from incompatible or detrimental intrusions but also provided general guidelines for developing the remaining open lands. Throughout the 1920s, developers lured workers into almost endless rows of sturdy, spacious, one-story brick bungalows. Residents of the "bungalow belt" usually found shopping nearby, because the zoning law fostered the development of outlying business districts centered on major transit intersections with heavy pedestrian

traffic. These shopping districts were also likely to include the “popcorn palace” movie theaters, in which architects such as Rapp & Rapp demonstrated their mastery of sight lines and acoustics and created spectacular interiors based on escapist themes.

Poverty, Racism, and the Growth of Slums

In stark contrast to the Loop’s nineteenth-century splendors were the adjacent slums. Owners had deferred maintenance on properties that they expected to raze as the downtown expanded outward. Tall-building construction had instead restricted development to the core of downtown, and decrepit transient housing soon ringed the Loop on all sides. On the South Side was the Levee, one of the nation’s largest vice districts, controlled by First Ward aldermen John Coughlin and Michael “Hinky Dink” Kenna.

The residential slums began about a mile west and south of the Loop. The poor, many of them immigrants, lived in old wooden houses standing cheek by jowl with factories and bars or in once-elegant apartments and mansions converted into rooming houses and then tenements. Some lots were filled front to back with ramshackle frame houses; others became refuse pits in front of houses that had not been elevated when the street grade was raised. Many of the tiny units had no bathrooms or kitchens. While other neighborhoods were adopting electricity and steam heat, the slums had yet to see gas lighting or coal stoves in every room.

Among the few constant features of slum life were the buildings themselves, the high death rates, and political bosses who prevented reforms. By doling out city jobs, they got enough votes to remain on the City Council for decades. The “gray wolves,” as the press called such grafters as Coughlin, Kenna, “Foxy Ed” Cullerton, and “Johnny De Pow” Powers, resisted efforts to end their hegemony. Political reformers could count on support only from the middle-class residents of the neighborhoods adjacent to the slums, and the political parties could not supply sufficiently strong challengers.

The multiplicity of slum problems called for a multifunctional solution. Such a “department store” approach to social reform was pioneered by Jane Addams, who arrived on the West Side in 1889 with Ellen Gates Starr to establish Hull House. The traditional approach to charity had been to dole out food and money from a downtown office or to intrude on humble homes with prying questions about worthiness. Addams, in contrast, believed that the proper way to help the poor was to live among them and create semi-public places known as settlement houses where those in need could find a variety of services. Hull House offered the arts, job training, health services, child care, physical education, domestic science instruction, a library, and a savings bank. Hull House expanded to thirteen buildings covering a square block and inspired the creation of fifty similar facilities across the city, most notably the University of Chicago and Northwestern University settlements and Chicago Commons. Ironically, by teaching job skills and thrift, settlement houses did not instill neighborhood loyalty and cohesiveness but instead contributed to the transience by showing slum residents how to move on to better lives elsewhere.

Burnham’s vision of the City Beautiful made only vague comments about how deconcentration could solve slum problems and failed to recognize that racial discrimination and poverty are perversely centralizing forces. So while preservation or dispersal were options elsewhere in Chicago, the Madison St. skid row still sheltered the homeless, and the dense ring of slums surrounding the downtown continued to house those too poor to afford anything else. Moreover, racial discrimination trapped the fifty thousand African Americans who migrated to Chicago during World War I in overcrowded areas, regardless of their economic circumstances. These new arrivals subsequently competed with returning veterans for jobs and housing, leading to a bloody July 1919 race riot. Threats of violence, combined with racial covenants in sale and rental agreements, kept the Black Belt a firmly walled enclave.

After World War II, although vast neighborhood-clearance lands lay vacant, the Chicago Housing Authority began a policy of erecting high-rise buildings



Chicago Housing Authority—Stateway Gardens under construction (demolished)

on compact sites, claiming as its motives the high costs of land and federal pressure to save money on construction. Critics, however, understood that the policy ensured that the maximum number of African Americans arriving from the South would be absorbed within the existing Black Belt, thereby decreasing the possibility that middle-class black families near its edges might move into adjacent white neighborhoods. By the early 1960s, Chicago officials had accepted the widespread belief that it was easier and cheaper to demolish whole neighborhoods of substandard old flats and bungalows than to renovate individual structures. The result was massive land clearance in a swath that encircled the downtown and expanded several miles into the South Side.

The Depression and Public Works

For most Chicagoans, prosperity disappeared as the 1920s ended. Declines in construction and other economic indicators had begun around 1927, and by the time Wall Street crashed in October 1929, the number of welfare cases had exceeded the capabilities of private agencies. Ironically, the central location that underlay much of Chicago's past prosperity made the city a prime destination for homeless people traveling in boxcars. Unfinished lower Wacker Dr. provided temporary shelter for both transients and residents who found themselves evicted or foreclosed. The Windy City seemed to be moving backward. Health and education services were cut to nineteenth-century levels, streets were strewn with garbage, and at least thirty downtown buildings—among them Henry Hobson Richardson's Marshall Field Wholesale Building and Burnham & Root's Masonic Temple—were demolished as their owners sought to avoid paying taxes.

Chicago turned to dramatic solutions. Where Mayor Thompson, a Republican, had built with bonds, voters in 1931 backed a new Democratic machine under Anton Cermak and his successor, Edward J. Kelly, who funneled federal New Deal money into massive public works projects. Not only was the Outer Drive Bridge opened in 1937 and Municipal (now Midway) Airport upgraded into a major facility, but new viaducts, sidewalks, school athletic fields, and other projects put paychecks in thousands of hands. Mayor Kelly enthusiastically backed the wholesale replacement of the slum belt with public housing projects. The first three were built in 1935: the Jane Addams Homes, the Julia C. Lathrop Homes, and Trumbull Park Homes. Chicago also began work on a long-delayed subway system, the first section of which opened under State St. in 1943.

In the boldest of all moves, in 1933, at the nadir of the depression, Chicago celebrated its centennial with the Century of Progress Exposition, sprawled along the lakefront and focused on what became the site of Meigs Field. The fair offered an optimistic statement that science, industry, and business would bring a return of prosperity. Its futuristic buildings were made of such unconventional materials as rolled steel, Masonite,



Chrysler Building by Holabird & Root, 1933 World's Fair

and plywood; bright colors, accents of neon and fluorescent lights, and a whimsical midway gave the fair an escapist atmosphere.

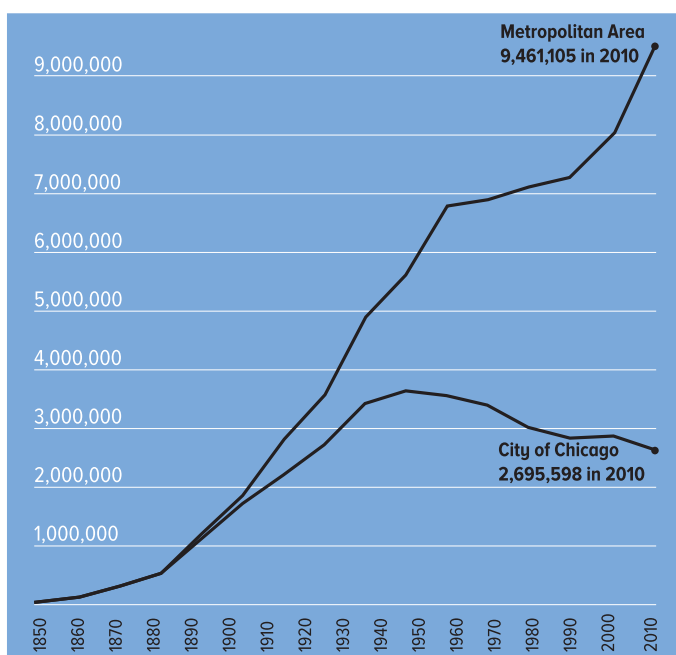
The depression ended with the military buildup of World War II, and Chicago's central location again shaped its role. Its diverse industrial base made the metropolis second only to Detroit as a producer of war materiel; however, the need to fulfill the fourteen hundred federal contracts awarded to Chicago companies led them to seek larger quarters outside the city. The gigantic Dodge-Chicago plant at 76th St. and Cicero Ave. (in what is now Ford City Shopping Center), the Buick aircraft engine plants in Melrose Park, and the Amertorp torpedo plant in Forest Park led the industrial suburbanization, which also drew the latest influx of workers to suburban "defense housing."

The Loop Reborn versus the Logic of Decentralization

Urban patterns entrenched by the Great Depression and wartime controls crumbled with the arrival of postwar prosperity and mobility, and although few people noticed at first, among the traditions in decline was centralization itself.

Many businesses remained eager to locate downtown. Beginning with the 1952 ground breaking for the Prudential Building, the first Loop skyscraper since the Field Building of the 1930s, tower after tower appeared in rapid succession. "The tall boys are sprouting in bunches," proclaimed one journalist in 1967. The Loop seemed reborn: the Inland Steel building, the Chicago Civic Center (now Richard J. Daley Center), the Brunswick, and the First National Bank building were just a few of the additions. Most buildings of the 1960s and 1970s were at least indirectly influenced by the careful, ordered style of Ludwig Mies van der Rohe, whose strong, black-framed glass towers became the ultimate statement of the curtain wall. Innovations such as the graceful curves of Lake Point Tower and the bold bracing of the John Hancock Center gradually came into style. The greatest structural achievement of the era was the Sears Tower, at 1,454 feet the world's tallest building at the time of its construction. Although pundits questioned its site west of the Loop, Sears chair Arthur M. Wood defended it using the logic of the centralization argument. The major factor in choosing the location was "our employees—how they would get to and from work," he explained. "The site we chose offers all the advantages we were looking for . . . close to the post office, financial district, government offices, and the major attractions."

For many others, however, the trend toward dispersal greatly accelerated. The first evidence was the suburban exodus of industry made possible by a superhighway system that had begun in 1954 with the Congress (later Eisenhower) Expressway. By 1960, work was either finished or under way on the Northwest (later Kennedy), Southwest (later Stevenson), Edens, and Kingery; the Dan Ryan soon followed. Industrial developers, who had long complained that zoning in Chicago stunted expansion by preserving too much land for residential purposes, grabbed at the irresistible lure of lower taxes and cheaper



Population growth

land in suburbia. They were quick to take advantage of the independence from rail depots made possible by the increasing use of truck transportation. The opening of O'Hare International Airport in 1962, on a former Douglas Aircraft Co. plant site, provided a new form of transportation hub particularly suited for manufacturers of high-value, low-bulk goods such as electronics. Chicago reached its peak population of 3.6 million in 1950 as developers were filling in the open tracts on the Northwest and Southwest sides. But land in the suburbs was cheaper, and by the early 1960s, virtually all new single-family construction was taking place beyond the city limits. In some suburbs, failed developments from the 1920s were completed near commuter lines; in others, the dominance of the automobile was recognized and developments were oriented toward highways.

Within the city, neighborhoods became less cohesive and no longer the focus of residents' lives. Many Chicagoans had traditionally met most of their needs with local churches, stores, saloons, newspapers, movie theaters, and schools. Outings to a major park or shopping expeditions to the Loop were special events. That world evaporated after World War II, especially in the wake of 1949 federal legislation that made it easier to obtain a GI Bill or Federal Housing Administration mortgage on a house in the suburbs than on one in the city. Two new phenomena—malls anchored by large chain stores and franchise food outlets—drew clientele from wide areas, forcing many neighborhood businesses to close, while television sealed the fate of the local movie house and local newspaper. Small manufacturing plants also closed, and more breadwinners had to travel longer distances to work, often by car. As neighborhood populations aged, their schools and churches struggled to survive.

The disintegration of neighborhoods affected Chicago's Democratic machine, which had begun the postwar years in a swirl of scandals that ended Kelly's fourteen-year mayoralty. His successor, Martin H. Kennelly, a moving-and-storage company executive, presented enough of a good-government image to hold the organization together while planners were laying out the expressway and urban renewal programs, but in 1955, the aloof incumbent found himself ousted by city clerk Richard J. Daley. Promising greater emphasis on neighborhood and family concerns, the new mayor kept the machine alive for the next twenty-one years, in part because he functioned as a symbolic bulwark against change. His early years in office benefited from the infusions of federal money that built O'Hare, the expressways, and a

new water-filtration plant, and he adjusted the machine to reflect Chicago's changing ethnic and racial makeup, though critics charged that his moves were too slow and too limited. He even survived charges that the police had exacerbated the riots at the 1968 Democratic National Convention.

But Daley's ability to deliver the vote began to wane in the early 1970s, and the city's Democratic political organization was slowly unraveling when he died in office in 1976. Voters now paid more attention to the media than to their precinct captains, and middle-class African Americans felt alienated. A half century of political stability was replaced by a succession of five chief executives in just over twelve years. In 1979, political maverick Jane M. Byrne upset Daley's machine successor, Michael A. Bilandic, but she, in turn, lost four years later to Chicago's first black mayor, Harold Washington, who proclaimed the machine dead. Washington's sudden death in November 1987 was followed by the interim mayoralty of Eugene Sawyer, who was defeated in a special election by Daley's son, Richard M. Daley. In 1989, Daley won a full term, but not as the head of the centralized, cohesive machine that had put his father in office.

The Birth of the Preservation Movement

The creation of the magnificent postwar skyline forced Chicagoans to deal with the constraints imposed by each generation of urbanites on its successors. Should they destroy the institutional artifacts of earlier ages, modify them to conform to present needs, or preserve them in their current forms? The earliest response was destruction. Federally funded urban renewal and land-clearance programs leveled entire neighborhoods, including churches, small businesses, and social institutions. Demolition occasionally had a specific intention, such as the clearance of the Hull House area to build the Chi-



Chicago Stock Exchange by Adler & Sullivan (demolished)

cago campus of the University of Illinois (opened in 1965), but more often, land was left vacant for decades.

In the Loop, the wrecker's ball was in the hands of private speculators who claimed many first-generation skyscrapers before Chicagoans began to realize that the demolished structures included some of the best examples of Chicago School architecture. In 1957, the City Council created a landmarks commission, but all it could do was issue plaques. Its inadequacy was underscored by the demolition of Adler & Sullivan's Schiller Building in 1960 and by its replacement with a parking structure whose facade parodied the lost classic. Nonetheless, eight years passed before Chicago had a preservation law and a commission (now the Commission on Chicago Landmarks) empowered to administer it. The subsequent loss of Adler & Sullivan's Chicago Stock Exchange in 1972 and the McCarthy Building in 1990 demonstrated that the commission could do little more than delay demolition unless the City Council designated a building for preservation and enforced that decision. At the same time, the Landmarks Preservation Council of Illinois (now Landmarks Illinois), the Chicago Architecture Foundation, the Chicago Chapter of the American Institute of Architects (AIA Chicago), neighborhood groups, and countless newspaper articles worked to foster a sense of pride in the city's physical heritage.

The Emergence of a Service Economy

A most significant postwar change was the gradual shift in employment from manufacturing to service-sector jobs. Although Chicago remained a leading industrial center, the number of blue-collar jobs in the city dropped by 77 percent between 1947 and 1982. By the early 1980s, more Chicagoans earned their money in nonmanufacturing employment than in industry. Chicago's role as the nation's transportation hub, strengthened by O'Hare's steady growth, attracted corporate headquarters and research facilities, rekindling intense competition between the city center and periphery. The continued lure of lower taxes and quick access by expressway, combined with the available acreage on which to build horizontally oriented office parks, generated a new wave of exurban construction. One hub developed in the O'Hare area, while another lay along the East-West Tollway between Oak Brook and Naperville. Even Sears, which had found the downtown so advantageous in 1974, moved in 1992 to a "campus" of low buildings in the northwestern suburbs.

The service-sector world, held together by silicon chips and fiber optics, is potentially much more mobile than the industrial world. It is no easy task to move heavy equipment; outmoded steel mills and other factories are simply closed. But service businesses can be transferred quickly and constantly seek newer, more flexible spaces that can accommodate rapidly evolving



W. Wacker Dr. in 1964



W. Wacker Dr. in 1992

office technology. This mobility has increased the competition for tenants in the downtown towers.

The most exciting result of Chicago's transition to a service economy has been the latest generation of downtown construction. Since the completion of the Sears Tower, well over one hundred other new buildings have appeared in the central area. They represent a construction boom even greater than that of the Richard J. Daley years. On many of these buildings, the Miesian frame box has yielded to shimmering glass and mirrors cast in curves and points. Michigan Ave.'s Magnificent Mile is the hub of a second downtown, an idea that had been promoted since the late 1940s by real estate mogul Arthur Rubloff.

Summary

Chicagoans have discovered the depth and variety of their architectural heritage. Not only has popular interest in downtown gems expanded, but the Tax Reform Act of 1981 sparked the interest of commercial developers, who invested heavily in renovating historic buildings. Although these incentives were subsequently reduced, older neighborhoods have been rediscovered and rebuilt, and many old factories adjacent to downtown have been reborn as lofts and galleries.

This trend has its negative aspects, of course, most notably in the loss of semipublic spaces in the Loop. Except for the waiting room at Union Station, the great railway depots are only memories. The vertical malls that draw crowds to the Magnificent Mile exemplify a new breed of semipublic space that seems to shield customers from the city rather than immerse them in it, as the Loop stores did. One of the most dramatic interior spaces of the type previously associated with department stores is a public one: the atrium of the James R. Thompson State of Illinois Center, which reinterprets the rotunda of a capitol building.

But cities change constantly, and in Chicago that process is always cause for optimism. If history proves any sort of guide, the city will continue to find new ways to be a leader, both as a special place and as the quintessential American metropolis. Chicago is both a museum and a laboratory in which to observe how an agglomeration of peoples deploys the finite space within the city's borders and how architects respond to the challenge of designing for them. Chicago's story relates the triumphs and failures, the problems and prospects, of all American cities.