MacArthur Fellow Jeanne Gang is widely recognized for her innovative and independent practice, Studio Gang Architects, which seeks to answer pressing current questions that exist locally and resound globally through architecture. With the studio poised to contribute a new set of buildings to the international skyline, *Building: Inside Studio Gang Architects* examines their most current work, twelve built and unbuilt projects that address four major issues facing contemporary architecture: its relationship to nature, questions of density, building community, and architecture as performance. Featuring essays, interviews, sketches, diagrams, and drawings—many previously unpublished—this beautifully illustrated book provides an insider’s look at a cutting-edge architectural practice. Including contributions by Michael Halberstam, Karen Kice, Zoë Ryan, Brett Steele, and Sarah M. Whiting.
BUILDING/
INSIDE
STUDIO
GANG
ARCHITECTS

edited by JEANNE GANG & ZOË RYAN

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Solar Carve Tower
OWNER: 40-56 Tenth Ave, LLC
LOCATION: New York, USA
SIZE: 186,700 sf
STATUS: Anticipated Completion 2015
Solar Carve Tower

New York City’s 1916 Zoning Resolution, which required that skyscrapers be set back from the street as they rise upward, was the first American law to address the tall building’s relationship to the space of the city. By putting rules in place to ensure the public’s right to sunshine and fresh air without explicitly limiting the height of the highrise, early planners and elected officials were able to prioritize public benefit over the private interests of unlimited floor area and bulk. Ralph Knowles, a professor at the University of Southern California in the 1980s, extended the concept of solar access as a zoning principle by introducing “the solar envelope” as a guide to shaping building form. When a new building adheres to the boundaries developed by Knowles’ research, solar access for neighboring properties is maintained during the key energy-receiving times of day and season. Sunlight is treated as a valuable resource, and everyone’s right to harvest it is ensured.

While these ordinances and envelopes are specific to latitudes and times of day, every city nevertheless produces spaces that defy their logic. In New York, that space is the High Line. Opened to the public in summer 2009, the High Line is the fortuitous result of a grassroots effort to save an abandoned elevated rail line in Lower Manhattan and the vegetation that spontaneously overgrew it. Now converted into a popular linear park, the High Line is a public phenomenon that lies not in the realm of the street but in the center of the city’s block structure. While this unique condition makes it an extraordinary urban green space, it also means that it is endangered rather than protected by the setback zoning regulations.

Our Solar Carve Tower employs a surprising twist to traditional zoning logic to resolve this condition. Designed for a site that borders the High Line on the east with the vast openness of Tenth Avenue, the Lincoln Highway, and the Hudson River to the west, the project proposes inverting the light and air setbacks from the already well-exposed street to the High Line, in order to prioritize the inner-block park. Geometric relationships between the building form and the sun’s path, as well as the viewshed between the park and the Hudson, guide the shave and shape of the tower. The result is a gem-like façade that displays the exciting architectural potential of expanded notions of solar-driven zoning—and a skyscraper that enhances the public life of the city in ways that a stand-alone icon cannot.
New York City’s landmark 1916 Zoning Resolution produced the “setback skyscraper”, a tiered building form that is native to New York but has reached international ubiquity. These 1922 renderings of architectural delineator Hugh Ferriss depict possible building forms produced by the regulations.

This sketch contemplates a radically narrower base of the building, shaved to preserve views from the High Line.
BUILDING DENSITY

Allowable building volume produced by city zoning regulations.

Allowable floor area designated by city zoning regulations.
Inverting the Setbacks: giving light, air, and views to the High Line.

Solar Carving: even more light, air, and views to the High Line. Final massing is the result of critically analyzing the building setbacks and form.
The building mass benefits the public by funneling sunlight to the shared amenity of the High Line.
Incident light accentuates the faceted glass wall of the solar carved surface.
Northerly Island Framework Plan

Nature Boardwalk at Lincoln Park Zoo

Chicago River Boathouses

Solar Carve Tower

Aqua Tower

Aqua Tower

Hyderabad O2

Arcus Center for Social Justice Leadership
City Hyde Park

Writers’ Theatre

Kaohsiung Maritime Cultural & Popular Music Center

Columbia College Chicago Media Production Center

Building: Inside Studio Gang Architects (Book)

Building: Inside Studio Gang Architects (Exhibition)
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Jeanne Gang and Zoë Ryan
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