Published in December 2008

New York Times Building
Amongst the skyscrapers of Manhattan, the office block of The New York Times Newspaper is a 21st century archetypal beacon in the world of high rise development. Transparent and bright, filigree and light, technically innovative. The lighting of the 250 metre high curtain facade, made of white ceramic tubes, transforms at night the entire building into a shimmering New York landmark. Thanks to modern lighting technology the skyscraper uses less power than it takes to light the observatory at the top of the Empire State Building.

New York Times Building

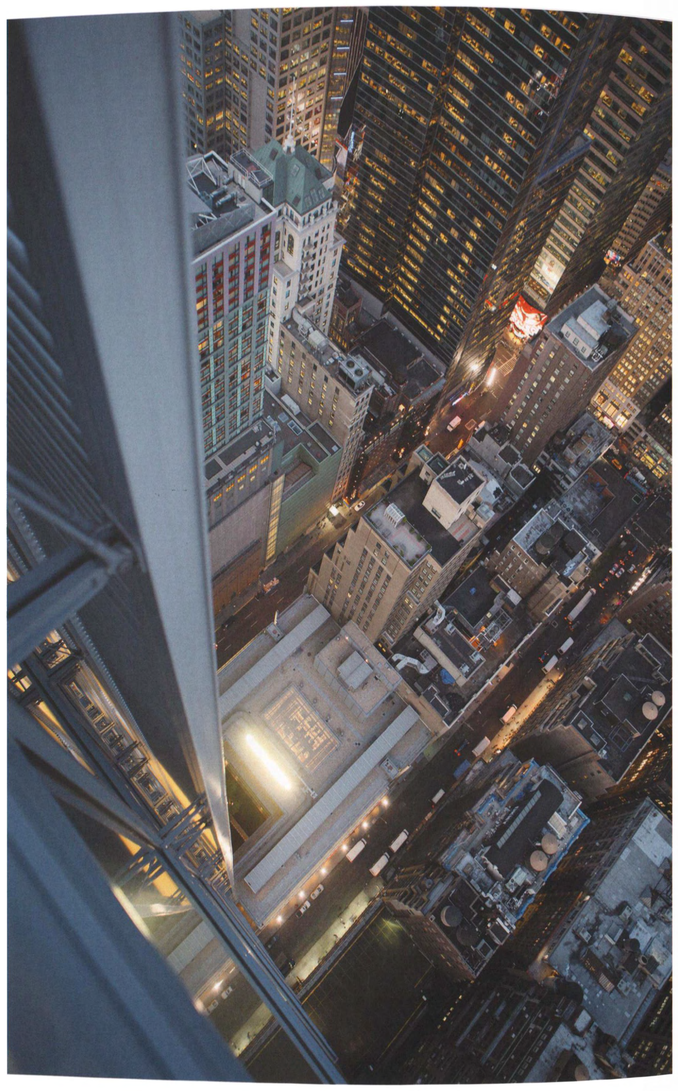
Manhattan gains another nocturnal landmark in the form of a new skyscraper, built for the well-established newspaper and featuring an illuminated facade. Architectural historian and lighting journalist Margaret Maile reports for us from New York.

Early in the 20th century, New York City set the standard for the modern metropolis with its soaring skyscrapers and luminous skyline. At the opening of the 21st century the city has witnessed a renaissance in tall building design, with none more remarkable than The New York Times Building designed by Renzo Piano Building Workshop/Fx Fowle and with lighting design by Jean Sundin and Enrique Peiniger of the Office for Visual Interaction (OVI). This monolithic tower of quiet beauty transcends the frenetic energy of Times Square and presents a technologically innovative, yet timeless icon for The New York Times and the city itself.

Lighting concept exterior

Renzo Piano has said, "The story of this building is one of lightness and transparency" and the notion of transparency and light runs throughout the design of the New York Times Building – from the ultra clear, low-iron glass and ceramic rods that compose the double-skin curtain wall to the carefully calibrated floodlighting that gives a delicate, warm glow to the exterior while allowing visual connection with the building's interiors.

At OVI, concept, innovation and technology always work in tandem, therefore it is not surprising that OVI's remarkable lighting program for the exterior of the New York Times Building began with the concept of lightness as well as the requirements of properly and efficiently illuminating the tower's pioneering ceramic screens – the first of their kind in the United States. According to Sundin, "the setting out point for the exterior was the screens." With the goal of articulating the soaring, lace-like quality of the screens, OVI developed a scheme where the floodlighting could be achieved with a single series of luminaires and a single lamp type. ERCO fixtures equipped with 250W Metal Halide lamps with an Fc2 base were paired with varying optical reflector systems to create the desired wallwash effect for the entire 260-meter elevation of the east and west facades. Narrow beam optics aimed to the top of the building provide a long throw of light, while narrow beams with spread lenses illuminate mid-levels and wide floods cast light on the base of the building. OVI chose metal halide lamps for their exceptionally long life of 10,000hrs+ and specified a warm, neutral white 3000K color temperature to complement the building's signature off-white ceramic screens. As with many OVI projects, exacting technical performance is a fundamental part of the New York Times Building's lighting program. For the finely calibrated floodlighting, luminaires with locking mechanisms allowed the necessary precision adjustments; while the optical design and integrated glare control minimize light pollution in the night sky.



Dizzy heights: it is only when peering down from the roof of the New York Times Building into the urban canyons of Manhattan over 260 meters below that the luminaires clustered on the roof of the ground floor building come into view.

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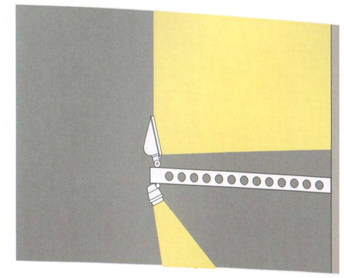
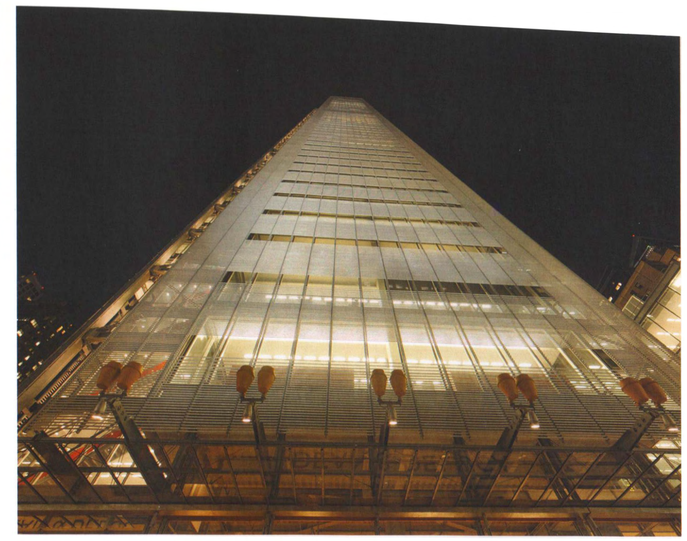
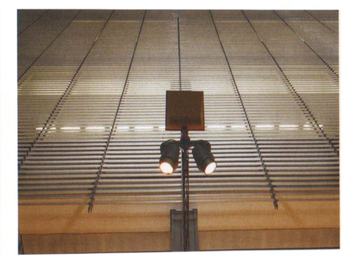
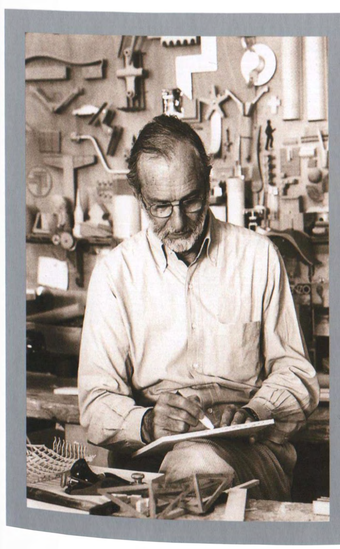


The cantilevers for mounting the luminaires are spaced to take up the rhythm of the facade. The luminaires are painted in taxicab yellow in response to the lighting regulations that apply in and around Times Square – more on this on page 14.



For the finely calibrated floodlighting, luminaires with locking mechanisms allow the necessary precision adjustments; while the optical design and the integrated glare control minimize the spill light and the lighting pollution of the night sky.





The architect: Renzo Piano

Often working together with designers such as Richard Rogers and Peter Rice, Piano has created key monuments of architecture and civil engineering all around the globe. His head office – named 'Renzo Piano Building Workshop' – is still based in his hometown of Genoa to this day; plus he has branches in Paris and project site offices throughout the world. In over 40 successful years in his profession, he has not left any leaf of architecture typology unturned. A host of architectural prizes pay tribute to his special blend of art, architecture and engineering acumen, which always seeks to integrate nature and social aspects. There is nothing that can be described as "typically Renzo Piano", but always a surprisingly new design born out of the building's function, the user requirements and the constraints of the climate and energy resources. His forte is tricky urban-development tasks such as the reconstruction and redevelopment of Potsdam Square in Berlin. The name Renzo Piano is synonymous not only with functioning museums and cultural buildings, but also with overcoming the challenges of utilitarian architecture, such as road-traffic infrastructure and industrial plants. Teaching and further education are permanently anchored in Renzo Piano's business philosophy, while ecological engineering is taking on an ever-increasing place in his designs. These strands of exhibition, ecological oasis, training center and research institute all come together in the world's 'greenest' natural science museum: the 'California Academy of Sciences' in San Francisco.

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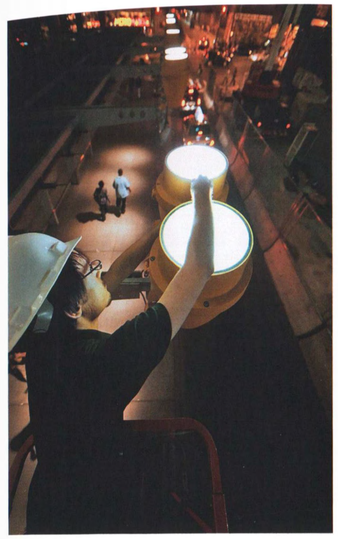
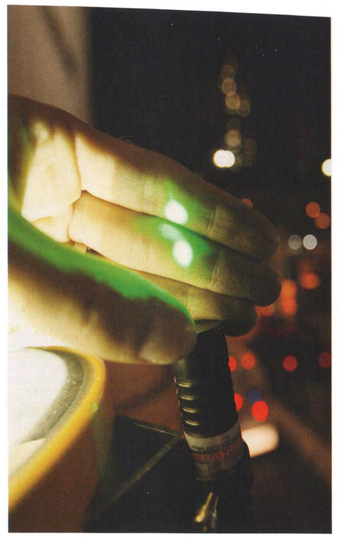
Laser direction finders were used to precisely aim the luminaires onto the facade. Aided by the green dot of light on the facade (right), the installation engineers were able to locate and fix the correct angle of adjustment (below).



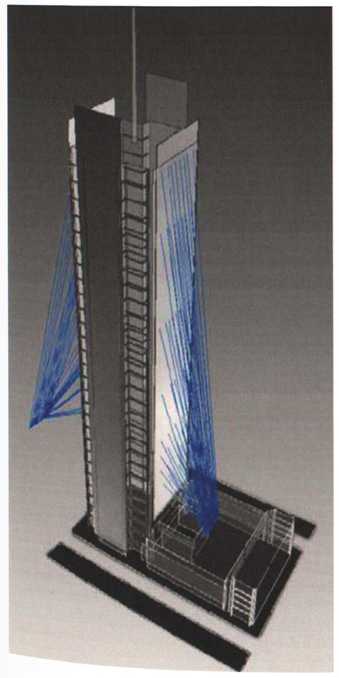


Focusing the outdoor lighting

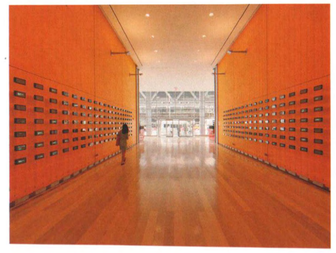
To illuminate extraordinarily large buildings or surfaces, you can simply use extraordinarily large luminaires and power outputs – or you can distribute the required luminous flux over a relatively large number of more compact luminaires. The latter not only has the advantage that you can fall back on standard, more economical lamps and luminaires, but it also allows a greater uniformity of lighting to be achieved – albeit only if you succeed in precisely aiming each luminaire such that the individual beams optimally overlap.

The lighting designers at OVI have already used this principle in many projects including, for instance, the plenary chamber of the Scottish Parliament and the US Air Force Memorial in Arlington. In the latter case, to achieve exactly the desired illuminance levels, OVI used laser sights for the first time, temporarily mounting them to the luminaires during focusing. Similarly, to achieve the desired uniform brightness progression of 1:3 between base and pinnacle, the projectors on the New York Times Building were also precisely aimed using lasers to map out the computer-calculated design and then locked in position.

Computer simulations were used in advance of the installation work to determine the position and aim of the luminaires that would give the best brightness progression (left).



The lighting concept takes a differentiated approach to each functional zone – as can be seen here at the security checkpoint. Lightscoop ceiling wash-lights mounted on special brackets give an idea of scale to the spacious lobby.



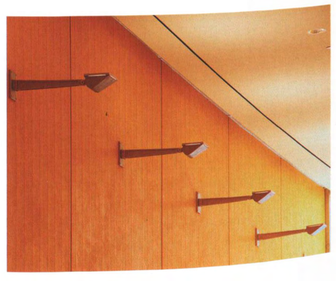
The lobby wall displays media art by Ben Rubin and Mark Hansen. Their "Moveable Type" piece consists of 560 text displays which a complex computer program keeps supplied with news contents from the current online edition of the New York Times and the paper's digital archives.

Foyer and garden lighting concept

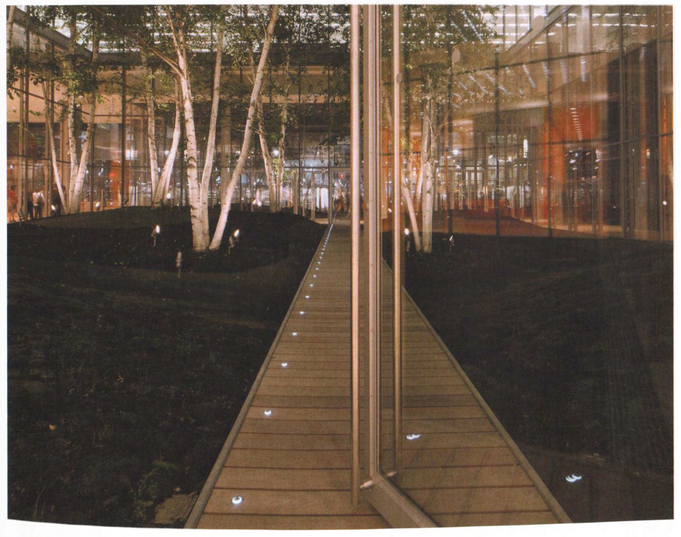
The story of transparency and lightness continues in the public areas of the ground floor of the New York Times Building. OVI translated these metaphoric qualities into three-dimensional space by finely composing light levels to visually activate and connect several distinct areas – the lobby, the central glass-walled enclosed garden, and the multi-use space of TheTimesCenter.

Describing OVI's design process Sundin says, "We are composing an entire view and the challenging thing about that is, based on the transparency of this project, everywhere you look you have views. It has to look good from every vantage point." The central glass-enclosed garden played a central role in anchoring these changing vistas and roaming perspectives, serving to guide the eye through the interconnected architectural volumes of the ground floor.

In order to achieve such a finely balanced composition for the public spaces, OVI simultaneously addressed both aesthetic goals and technical requirements. Recognizing the specific light levels necessary for such programmatic elements as lobby circulation, security, retail areas, displays and more, OVI began by mapping out a lighting master plan to determine how these needs could be fulfilled while preserving and even enhancing views into the garden. Peiniger says, "We were careful not to let one element dominate. We considered the space and views in terms of foreground, middle ground and background." OVI was conscious of highlighting the garden as a focal point without pushing the lighting to an extreme in either direction. For example, too little light in the adjacent areas would create a 'tunnel effect'. However, "a blanket of same light everywhere" according to Peiniger, would greatly undermine the uniqueness of each element.



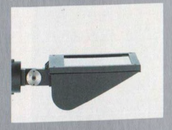
Manhattan has a new and architecturally discerning facility with ultramodern furnishings and fittings in the form of TheTimesCenter within the ground floor of the skyscraper. It regularly functions as a venue not only for talk shows but also for chamber concerts and film shows.



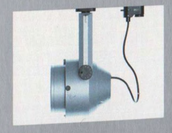
From the precision aiming of the uplighting of trees in the garden to the subtlety integrated theatrical lighting array in TheTimesCenter's auditorium, close attention was given to the most minute details and technical performance, illustrating OVI's commitment to providing not only the best lighting, but also the most comprehensive integration of aesthetics and technology.

List of ERCO luminaires used

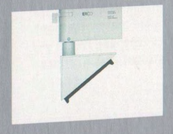
Beamer projectors
Facade and pathway lighting



Lightscoop washlights
Facade and indirect lighting



Stella spotlights
"TheTimesCenter" auditorium



Optec wallwashers
Conference rooms

LED orientation luminaires
Atrium

Let the lighting technology decide

Margaret Maile interviews Jean Sundin and Enrique Peiniger in OVI's offices

www.oviinc.com

The site inspection on the roof platform of the New York Times Building, almost at eye-level with the Empire State Building, demonstrates the exceptional commitment from all parties that projects of this scale demand.

Margaret Maile (MM): What were your primary concerns about designing the exterior lighting program for a building in the heart of Times Square?

Jean Sundin (JS): Generating a cultural lighting icon on the Manhattan skyline is a big responsibility and there is no second chance to make it right. In addition, we had to balance a classic timeless lighting design for the building while responding to the lighting criteria of the Times Square district – in a time of energy awareness.

Enrique Peiniger (EP): Many buildings in Times Square have flashing colored lights, LED screens, etc. That was not a design approach that anyone wanted for this building, so we had to creatively invent different ways of solving these kinds of problems in terms of lighting, in addition to illuminating the monolithic ceramic facade screens.

MM: So you were not just looking to the past or present context, but actually to the future context of the New York Times Building?

EP: We think a lot about how our projects age over time. We know that the Times Square district will continue to evolve and change character as time goes on and The New York Times Building will anchor this new neighborhood and business district.

JS: The lighting is really imbedded as part of the architectural design, it is locked into the facade and it is part of the overall building module. This building is a new landmark for the city as such the design has to be long lasting. The taxicab yellow makes reference to the unique cultural context of New York City. The lighting details are scaled, well-detailed and visually appropriate. It takes a multi-disciplinary design dialog and collaboration with the client, design team and the industry to make design ideas a reality.

MM: How does your design process translate into selecting luminaires for this project? Why did you choose ERCO luminaires? How did they best realize your concept?

Two stops down from the New York Times Building the subway reaches OVI's offices on 25th Street – the birthplace for lighting concepts for projects as varied as the Scottish Parliament in Edinburgh and the US Air Force Memorial near Washington.

EP: Our approach is to 'reverse-engineer' the lighting design. At the beginning of a project we think about the end-user and how the luminaires will be maintained. The luminaire selection is an evaluation of needs and technical performance. There are a lot of tools to choose from.

JS: We created a lighting design for the entire building exterior and all public areas of the project, which only requires 12 different lamp types. We evaluated many manufacturers who we know would be suited to the project as well as the product numbers, handling and maintenance features, technical features and other issues. We've cross-referenced and evaluated all of them in great detail.

EP: Who has a locking device? Who has a captive screw? Who has an integral glare control? We compared all of their features and capabilities. For example some fixtures require two different lamps and wattages with two different maintenance cycles due to lamp life.

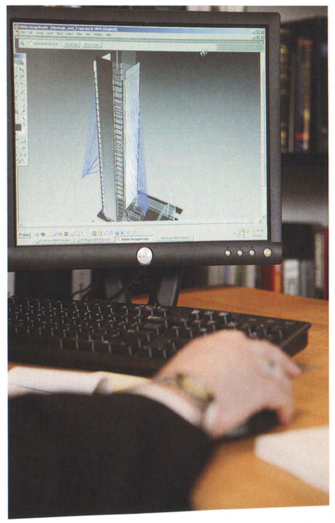
JS: In the end, ERCO fixtures were selected. We could illuminate the entire facade utilizing three different luminaire optical systems which all take the same lamp. The fixtures are energy efficient and visually appropriate for the facade.

EP: We have very complex projects and we have to step back and look at the facts. The point is, what is the quality of the fixture and how does it perform? Our evaluation process allows us to make a clear and rational decision about what product is best suited for the project.

MM: What was the single biggest challenge for OVI over the course of the New York Times Building project?

JS: Helping others realize that with only 250 watts, we could illuminate a facade that is more than 260 meters high! Typical floodlights require 400w or 1000w to do the same job.

EP: Keeping the aim in sight. To not get distracted by all the daily work. You have to identify the big picture, stay focused and determine how to implement it.



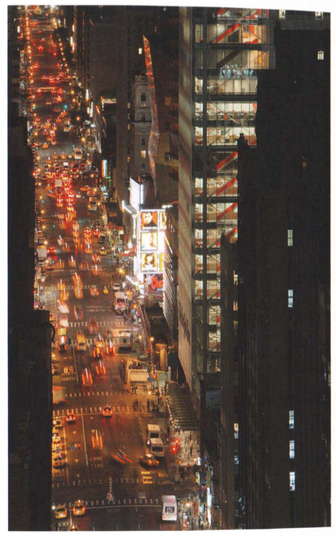
Whether on paper or on the screen, intelligent design processes hold the key to OVI's success as experts in architectural lighting.

New York Times Building

The context of the Times Square District – one of the brightest and most iconic of such urban areas in the world – was central to the concept development for the exterior lighting of the New York Times Building. The timeless, classic quality of RPBW's architecture is fundamentally at odds with the exploitation of media screens and skins typical to Times Square. However, as a new building in the Times Square District, the New York Times Building was required to animate the facade to be in compliance with district regulations. As Peiniger describes, "The point for us was to find the language that was appropriate for The New York Times and for RPBW."

OVI suggested that the pairings of ERCO fixtures used along the pedestrian level of the building's podium be custom painted taxicab yellow. These ERCO fixtures were mounted as direct extensions of the facade's modular bays, providing visual punctuation to the rhythm of the building as well as illuminating the facade and the walkway with a sense of excitement and energy. In this way OVI was able to visually animate the facade (and satisfy local authorities) in a manner that has great resonance with the culture and streets of New York City without contradicting the character of the architecture.

Cleverly sidestepping the use of LED screens or other moving lights or signage, now so commonplace on neighboring buildings, OVI's designers added a dash of color by specifying luminaire housings in taxicab yellow.



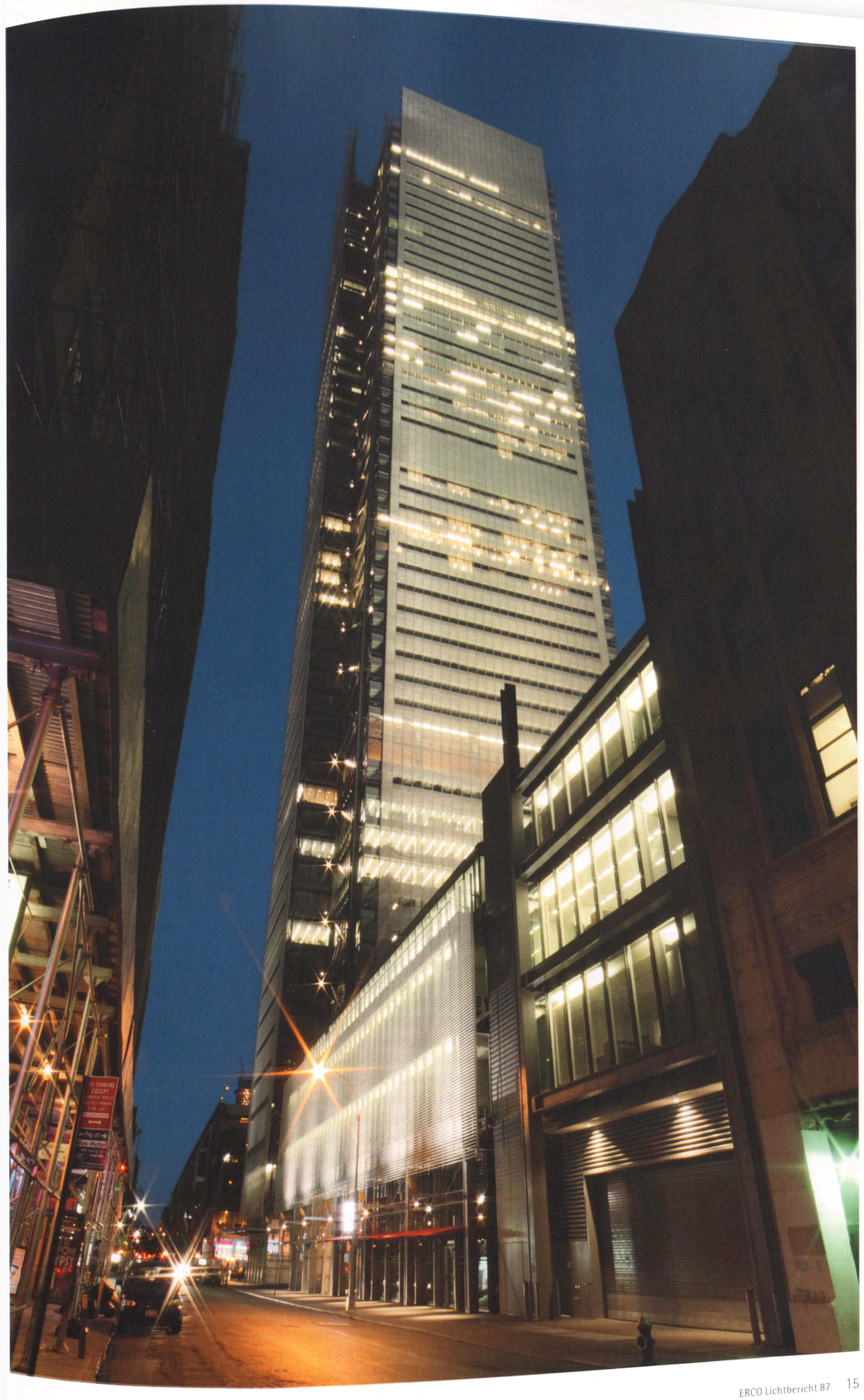
The view from the Empire State Building shows how the new building sets the tone on the Manhattan skyline. The relationship to the red-lit, art deco Paramount Building on Times Square is interesting – especially considering its basement temporarily provided storage for the neighboring printing plant of the New York Times.

Contributors
Client: The New York Times/Forest City Ratner Companies

Architects: Renzo Piano Building Workshop (Genoa/Paris) in collaboration with FXFowle Architects, P.C. (New York)

Competition (2000)
Design Team: B. Plattner (senior partner in charge), E. Volz with G. Bianchi, J. Moolhuijzen (partners), S. Ishida, P. Vincent (senior partners), A. Eris, J. Knaak, T. Mikdashi, M. Pimmel, M. Prini, A. Symietz

Consultants: Ove Arup & Partners (structure and services)

Design Development, 2000-2007
Design Team: B. Plattner (senior partner in charge), E. Volz (associate in charge) with J. Carter, S. Drouin, B. Lenz, B. Nichol, R. Salceda, M. Seibold, J. Wagner and C. Orsega, J. Stantford, R. Stubbs, G. Tran, J. Zambrano; O. Aubert, C. Colson, Y. Kyrkos (models)

Consultants: Thornton Tomasetti (structure); Flack & Kurtz (services); Jenkins & Huntington (vertical transportation); Heitman & Associates (facade consultant); Ludwig & Weiler (storefront); Office for Visual Interaction (lighting); Gensler Associates (interiors); H. M. White (landscape); AMEC (construction manager)