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# stainless building

## bulletin

Stainless Building is the number one information resource on the use of stainless steels and titanium for architectural, building and construction purposes

## Use of stainless steel in exterior cladding

**Architecture is an art of response; a creative and poetic response to the programme requirements, site conditions, and most importantly, to the spirit and culture of the place. An important element that defines the spirit of the place is the quality of its natural light.**

Lawrence S. Ng, AIA, Associate Principal,  
Cesar Pelli & Associates

**B**uildings are not static elements. The exterior wall surfaces are rendered by sunlight; the color and atmospheric quality of the rendition are unique to its specific locale; and they change with the season, and the time of the day. A beautiful example of this phenomenon is provided by the works of French Impressionist painter Claude Monet, in his 1892-1895 *Rouen Cathedral* series of thirty paintings, focusing on the facade of Notre Dame Cathedral; how the sun rises from behind in the morning, casting the frontal facade of the Cathedral into a bold silhouette; how in the afternoon, the light cascades down the facade illuminating it with a golden glow; and how as darkness approaches, the facade receives the last ray of light. The temperament and personality of the building change with the changing atmospheric conditions.

The material finishes of the exterior cladding, especially their reflective behavior under different lighting conditions, are therefore important considerations. Stainless steel has an inner glow; it absorbs light and radiates it back with a quality unique to its environment. It is this site specific reflectivity of stainless steel that appeals to our firm. Since the completion of the *Canary Wharf Tower* in London, our

firm has designed more than ten projects, utilizing stainless steel as a cladding material.

### Canary Wharf Tower, London

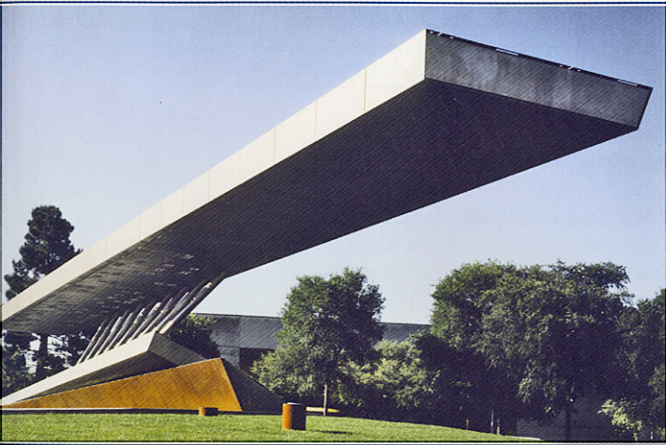
Unlike Manhattan, London does not have a tradition of skyscrapers. The skyline of London is best remembered by Christopher Wren's *St. Paul Cathedral* and the *House of Parliament Towers* designed by August Pugin. Both buildings are conceived of pure, simple and powerful Classical ideas. The iconic power of these simple architectural forms are best illustrated by the paintings of George Cole and Canaletto.

When we designed the *Canary Wharf Tower*, we decided to follow the same architectural tradition by adopting a similarly clear, strong and powerful idea - a square prism with a pyramidal top. For the exterior cladding, we wanted to choose a material that would best capture the ever changing atmospheric quality of the London sky; and a material that would symbolize England's industrial heritage. Stainless steel, with its ability to diffuse light and

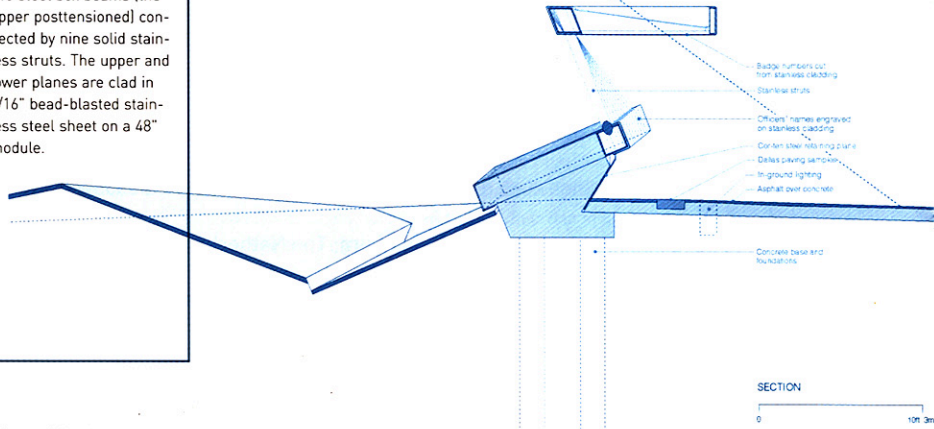


Edward M. Baum FAIA, USA

# Dallas Police Memorial



The armature of the superstructure is fabricated of two steel box beams (the upper posttensioned) connected by nine solid stainless struts. The upper and lower planes are clad in 3/16" bead-blasted stainless steel sheet on a 48" module.



## Program, site & urban context

A foundation led by police personnel raised funds (about \$1.8M) for a memorial to the city's officers who have died in the line of duty, seventy-two thus far. The program called for the names of the officers to be permanently displayed along with the image of a badge, and an area accommodating 200 for the annual remembrance service. But above all, the foundation asked for a place where the public, the families, and fellow officers would be assured that those who fell were not forgotten. The site is a two-acre triangle of park land adjacent to Dallas City Hall and its plaza. Also bordering the site are the Dallas Convention Center, and Pioneer Cemetery where many early leaders of the city are buried.

## Intentions & approach

The overriding intention was to connect directly to ideas important to the

officers and to the public. Primary connections are to the flags on City Hall Plaza and to the street itself. The line of the memorial structure turns against the prevailing city grid to squarely face these established symbols of the United States, Texas, and Dallas. Along this line the earth is folded back to essentially extend the street under two stainless steel clad planes — one askew on the ground, the other floating above. A second line, a walk, crosses under and connects to the cemetery and the city beyond. At the scale of the individual, each fallen officer's badge number (their identity code to each other) is cut from the stainless steel plane above. This removal allows the sun to project the number on the asphalt paving below; it also allows the numbers themselves to be framed and given to the officer's family. In this way pieces of the memorial go out into the community. And the reverse is also true; pavement samples gathered from Dallas streets are brought to the memorial and form a band in the asphalt, which helps mark where the officers' names are engraved on the lower plane. The numbers and names are placed on the memorial within a randomized grid. When additional numbers and names must be added the necessary upper and lower panels are unbolted, incise

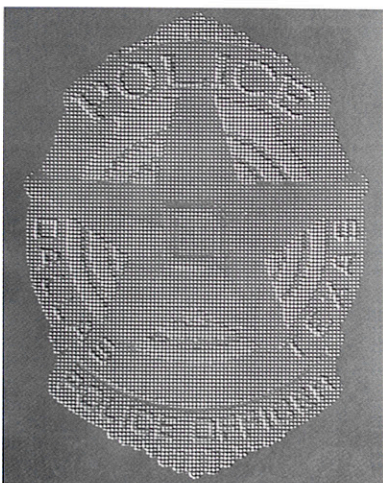
and engraved, and then reinstalled, a simple operation. A screened photograph of the Dallas Police badge has been milled into the stainless steel dedication standard along the street, which also marks the entrance to the walk across the site. Eileen Ruth Webb from Ornamental Iron, San Pedro, CA, was responsible for the sculptural and artistic element as a portion of the dedication sign at the memorial.

## Materials & assemblies

The concrete foundation and surrounding earthworks are fronted by a 1" thick cor-ten steel retaining plate. The armature of the superstructure is fabricated of two steel box beams (the upper posttensioned) connected by nine solid stainless struts. The upper and lower planes are clad in 3/16" bead-blasted stainless steel sheet on a 48" module. The formed plates are secured by exposed fasteners beneath openings cut in the edges of the sheets. Paving is sealed asphalt except for the concrete walk and low steps along the street with stainless steel risers. Illumination is entirely from a row of inground fixtures, which use the memorial itself as a reflective device. □

**Dallas Police Memorial**  
Location: Dallas, Texas  
Owner: Dallas Police Foundation  
Design Architect: Edward M. Baum FAIA, John P. Maruszczak  
Associate Architect: Oglesby Greene  
Structural engineer: DATUM Engineers, Inc.

At the scale of the individual, each fallen officer's badge number (their identity code to each other) is cut from the stainless steel plane above. This removal allows the sun to project the number on the asphalt paving below. Photo courtesy Charles Smith.



A screened photograph of the Dallas Police badge has been milled into the stainless steel dedication standard along the street, which also marks the entrance to the walk across the site. Photo courtesy Edward M. Baum, FAIA.

