

LD+A

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Office 2.0

Beats By Dre

McCann Erickson

Jacobs Engineering

ShopperTrak

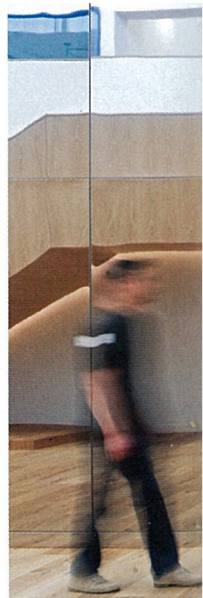
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Beats by Dre's sleek, colorful headphones seem to read consumer minds—and it's not just because they're attached to people's heads. The headsets merge technology and fashion, and they've come to be known just as much as a style accessory as for their sound capabilities. In a way, the headphones offer a two-for-one deal, which stands out amongst today's sea of electronics options.

Not surprisingly, the unique design proved successful from the start, causing rapid expansion for the company. Since Beats by Dre was founded in 2008, speakers, streaming services and accessories have been added to the product line, as well as several hundred employees. Company growth called for a new headquarters that could accommodate 650 employees (including four executives and three CEOs) across more than a dozen departments. In 2012, Loescher Meachem Architects and Bestor Architecture designed the company's new 105,000-sq ft campus in Culver City, CA. The site, which opened last spring, is defined by its sprawling layout, but separate areas are all connected via one main hub.

In the same spirit as Beats' products, the new headquarters is stylish and modern with pops of bold color throughout. Excitement is balanced by details that ensure the overall aesthetic remains elegant and sophisticated to represent the quality of the company's products. Lighting Design





Alliance (LDA), Los Angeles, created the illumination plan for the new site. The design team—consisting of Chip Israel, Patrick Salmons and Ashley Yin—was tasked with providing a flexible system for various users, while also accentuating the company’s key branding themes—style and quality—which are conveyed through the architecture and décor.

“The overall goal was to create a modern office environment with stylish, decorative fixtures, energy-efficient light sources and sophisticated control systems,” says Patrick Salmons, former lighting designer with LDA. “The lighting not only complements the architecture, but captures the essence of the company itself.”

THE CAMPUS

LDA worked alongside the architects and engineers for approximately two years during the design and construction process. Two existing industrial buildings were repurposed for the new headquarters, which now consists of one sprawling site with multiple distinct but connected parts.

First is the main building, which sits at the front of the campus and houses reception areas, administrative and marketing departments, and lounges and conference rooms. Its defining feature is the two-story lobby that runs its length, doubling as a corridor that connects two atriums on each side of it. The lobby is large enough for all of the employees to gather in at once, and features a small café as well as tables and break-out spaces for collaborative meetings. Workspaces in the main building are within the two atriums—one has a blue color theme and is used by the operations departments, while the other is white and is used by the marketing departments. Both atriums have second-story meeting rooms that overlook the more communal lower-level spaces with open desks.

The central lobby, sandwiched between the blue and white atriums, has black-and-white striped tiled flooring, as well as some raw-concrete floor-



In both atriums, existing structural beams were customized to house three-headed recessed fixtures without altering the construction of skylights.

Cushioned benches (far left), backlit by linear fluorescent slotlights, are recessed into the walls of bright red corridors.

A two-story lobby with a café—illuminated by daylight and LED downlights—runs the length of the main building, connecting the spaces.

ing, both juxtaposed by wooden walls and finishes to add warmth. Wood was also used for staircases and walkways, but accents such as full-length golden walls add extra energy. Another energizing element is the corridors that connect the atriums and lobby, which are completely red—another one of Beats by Dre’s defining colors—and feature nooks with cushioned seats that are backlit by linear fluorescent slotlights. Throughout the building, photo murals of Los Angeles and geometric wall patterns provide finishing design touches.

The campus’s second building houses an acoustic testing lab, Beats’ engineering and develop-



A wooden staircase is juxtaposed by reflective gold walls—just one example of how the office balances excitement and sophistication.

ment departments, and a gym and larger café. Though separate, the building is connected to the main space by an exterior courtyard and walkway.

CONNECTING THE DOTS

For the architect, challenges included creating an exciting and colorful atmosphere without it being cliché or tacky. For the lighting designer, obstacles were a bit less abstract. The largest lighting hurdle involved the structure of the campus’s anchoring features—the central atriums. “Big skylights brought large amounts of daylight into the spaces, but they took up most of the ceiling, making it difficult to locate fixtures,” Salmons explains. LDA crafted a custom solution

using an existing ceiling beam, but the process involved some finagling. “We were able to work with the design team to increase the size of the beam, which allowed us to recess several three-headed adjustable fixtures within the beam,” Salmons says, adding that illumination from the beam lights both atriums without compromising the skylights’ construction. “Without surface mounting or suspending fixtures from the skylight, we were able to keep the architectural lighting as minimal and unobtrusive as possible.”

Over open workspaces, 12-ft linear fluorescent direct/indirect pendants provide general illumination at an average of 30 footcandles. The large pendants (Axis Lighting) are dimmable and connected to the building’s daylight harvesting system to maximize energy savings. Throughout, LED downlights (USA Illumination and Wila Lighting) provide additional illumination. “With the exception of the linear fluorescent fixtures, almost everything in both buildings utilizes the most advanced and efficacious LEDs on the market at that time,” Salmons says.

In small offices and conference rooms, LED downlights and wall washers (also by USA Illumination) provide task lighting, with decorative LED pendants—custom-made in various shapes, sizes and colors—placed above tables to add a unique look to each individual space. In some conference rooms and private offices, linear fluorescent cove fixtures (Litecontrol) provide extra diffuse lighting.

Across the way, the second building’s two-story open offices are lighted by large, pendant-mounted 9,500-lumen LED high-bay fixtures from Beta-Calco. Similar to the main building, designers supplemented the pendants with LED downlights throughout. These fixtures are also connected to daylight sensors, and lighting levels are adjusted depending on the amount of daylight present. Across the campus, all fixtures are linked to one control system. “The networked control system allows the facilities manager to



Large, pendant-mounted 9,500-lumen LED fixtures provide general illumination in the campus's second building. Custom decorative pendants forge unique identities for different areas throughout.

monitor and control both buildings from a single location," Salmons says.

Use of LEDs, daylighting and controls brought the project in at approximately .7 watts per sq ft, and the building complies with California's Title 24 energy code. The office was also selected for a 2015 National American Institute of Architects Award for Interior Architecture. Most importantly, Salmons says, the space reinforces the company's original reputation, as well as its growing character. "Beats' unique style and branding has now transformed their product into a fashion accessory and statement. The highly stylized and modern interiors and architecture of the headquarters mirrors that energy and excitement, and is accentuated by the lighting." □

THE DESIGNERS



Chip Israel, LC, Fellow IALD, LEED AP, Member IES (1994), past-president IES, is CEO and founder of LDA, with offices in Los Angeles, Dubai, Houston and Shanghai.



Ashley Yin is a designer at LDA.



Patrick Salmons is a former lighting designer at LDA.

FAST FACTS

- Beats by Dre's open-office headquarters accommodates 650 employees.
- Two industrial buildings were repurposed to create the HQ.
- The campus uses mostly LEDs, coming in at .7 watts per sq ft.

When Jacobs Engineering set about upgrading its headquarters in Pasadena, CA, it didn't have to look far for a designer: the firm's own architectural division took on the work. After all, who better to redesign a workplace than the ones actually using it?

What was clearly a benefit to the project—having client and user be one and the same—proved also to be one of the challenges for lighting designer Le Nguyen and her team at Francis Krahe & Associates in Los Angeles. Working for a client who's been in the same industry since 1947 and happens to be one of the largest professional services and construction firms in the world brought an added level of pressure, as well as an opportunity. "Due to the fact that Jacobs is an engineering firm with established standards of practice and practical, efficient, safety-first business goals, the concept of introducing a more modern, contemporary, fresh view on the office environment took some convincing at first," says Nguyen, who earned a 2014 IES Illumination Award of Merit for her efforts.

Jacobs' objective was to modernize the 84,000-sq ft facility built in 1984 with clean, seamless details

Reengineering the Workplace

A venerable engineering firm reimagines itself by promoting a more open corporate culture

BY REBECCA FALZANO



Photos: Hedrich Blessing



1. Diffuse indirect sources illuminate informal gathering areas within Jacobs "University."

2. The core walls of small conference rooms were highlighted to balance the brightness from daylight at the perimeter windows.

3. In the lobby, layered lighting creates a soft, diffuse effect. "Jacobs blue" appears on surfaces, glass and furnishings throughout.

4. In conference rooms, 4-in. lensed fluorescent fixtures with adjustable LED-MR16 accent lights provide uniform vertical illumination during video-conferences.

Long lamp-life LEDs were used throughout for ease of maintenance.



and state-of-the-art lighting and controls—in other words, to create a “smart” design worthy of a modern-day engineering firm. Conceptualized as an open and transparent office that encourages cross-company communication and collaboration, the space allows employees to engage in other activities from wherever they are working. Inter-office meeting areas—including one called Jacobs “University” where employees can gather informally—were designed to foster collaboration and connectedness.

A LAYERED APPROACH

With the interior design anchored to this idea of open corporate culture, the lighting design had to follow suit. To support the notion of transparency, Nguyen and her team created a layered lighting design to fuse spaces together visually for a more perceived open environment so that, as

Nguyen says, “the lighting from one space contributes to the next.” As one enters the elevator lobby, a seamless design reveals layered lighting that is soft, diffuse and visually comfortable. Here, visitors get their first glimpse of the “Jacobs blue” that is repeated on interior surfaces, in glass coloring and on furnishings throughout, reinforcing the company identity. Interior finishes travel visually from one space to the next while architecturally colored glass allows visual connection.

Since the project involved the renovation of an existing older building with smaller punched perimeter windows surrounding the main office environment, there was a lot of daylight contrast to contend with. Layers of light over the main office space and additional layers to illuminate interior wall surfaces were required to compensate for the brightness ratio from perimeter walls. The design team maximized the daylight contribution



In the open office, linear fluorescent slot fixtures are the primary source. Linear LEDs in the ceiling plenum highlight the glass-cladded columns, accentuate the round ceiling cutout and provide egress pathway lighting.

with automated shades and daylight harvesting at perimeter locations, while transparent glass partitions at the building core support a visual connection to daylight.

Within the office's main central corridor, the columns were illuminated, as Nguyen explains, to "lighten up" the impression of structural obstruction. These glass-cladded columns were highlighted with directional linear LEDs that accentuate a custom 8-ft glass round ceiling cutout, as well as provide sufficient pathway lighting. In addition, the building core and elevator lobbies were surrounded by a consistent row of high-safety linear wall washers that create an emergency egress path.

TEAM BUILDING

In the spirit of collaboration, informal work spaces were created to encourage communication among staff. In small conference rooms or

"hub rooms" where employees can have private meetings and discussions, walltalkers dry-erase boards and adjacent core walls were consistently highlighted to reinforce a visual connection to the center of the building, and to balance the brightness values of daylighting from perimeter window walls. High-efficacy, good-color quality and long-lasting LED lighting was used in most areas where seamless architectural details were incorporated without eating up too much of the \$11.30 per sq ft lighting budget.

Where fluorescent lighting seemed more sensible, 4-in. profile linear fluorescent lensed slot fixtures were used as the primary open office and private office lighting equipment. Occasionally supplementing this overhead lighting are small-scale linear LED continuous fixtures integrated into millwork and architectural details. Conference rooms, used for video conferences as well

A custom 8-ft circular resin ceiling fixture sets a less formal tone in this office used by executives for private meetings.



as meetings, also feature fluorescent slot fixtures with adjustable LED MR16 accent lights for providing shadowless vertical illumination onto participants' faces when videotaped.

Jacobs "University" relies on diffuse indirect lighting for its more informal gatherings. Even the office used by executives for private meetings has a distinctly relaxed vibe; it includes a custom 8-ft circular resin LED ceiling fixture that provides a warm and peaceful glow.

To meet the Title 24 energy code, where sources are closest to the surface to be illuminated, small-scale, low-intensity and low-wattage linear LED continuous fixtures supplement the layered approach to connect spaces visually and provide soft diffuse reflected lighting throughout. Where medium to high illumination was required from ceiling heights, mid to higher efficacy LEDs with optical control for greater effectiveness were utilized. Most light sources used in the main office spaces are color-corrected warm white 3000K LED. However warm white fluorescent lighting was utilized in main office spaces, due to the lack of available cost-competitive LED sources at the

time, according to Nguyen. In addition, all lighting fixtures were integrated into architectural details for low maintenance, easily accessible with remote power supplies located in the most adjacent accessible locations.

"One of the most rewarding parts," says Nguyen, "was creating a visually open environment for a company, changing the view of what an engineering office could or should be." And Jacobs employees no doubt agree: they now enjoy a headquarters that's not only "smart" but modern, sleek, open and collaborative—a fitting space to house an industry giant. □

Rebecca Falzano is a former associate editor with LD+A.

FAST FACTS

- The space emphasizes collaborative areas.
- "Seamless" layered design allows lighting from one area to contribute to the next.
- The lighting budget was \$11.30 per sq ft.
- The project beat Title 24 requirements by almost 9%.

THE DESIGNER



Le Nguyen, Member IES (2006), is vice president of Francis Krahe & Associates.