

## Creating light for special applications

Effective lighting is borne of an understanding of the aesthetic and technical aspects of design and how these relate to the way in which the environment is perceived. The lighting can be functional or decorative or both functional and decorative. In many installations the primary goal is to incorporate ambient illumination into the architecture through the use of indirect sources. Others add decorative fixtures to create variety and impact. Regent Lighting Solutions offers all these, but *Lighting in Design* spoke to Randal Wahl about what are termed 'specials'.

The request for a special fixture is usually, according to Wahl, from an architect or lighting designer and frequently involves a design element or piece of art that will mark a structure as different i.e., the architect may design a pendant that is more decorative than functional for a corporate office or building. Another time, the architect and his or her client may want to light the curve of a bridge or supply special lighting to emphasise certain key design elements of a commercial building.

Whatever the requirement, the key to a successful partnership – as Wahl says repeatedly – is collaboration; from the first sketch to the final installation when the lights are switched on.

The process seems simple enough: the architect or lighting designer provides a rough sketch, often hand drawn, of the envisaged fitting, sometimes with an example of something similar; in-house designers interpret the sketch and send it for approval; the architect makes changes if required and the designer then creates a 3D rendering of the

product, including how it will work and how it will finally be mounted to the planned surface in situ. Once this is approved, a mock-up is made to see what the difficulties could be and to validate the design. If necessary, further mock-ups are made until the architect and his or her client are happy with the outcome.

In reality, however, the procedure has to be managed minutely. A special fitting defines its creators and must look good for years to come. Apart from working with the client to establish what is possible in terms of design and manufacture, the manufacturer has to consider photometrics, mounting options, the environment in which the fitting will be fixed, structural concerns, wind loading for external fittings, ease of servicing and maintenance. Wahl says, "We drive people mad finding out, for example, how the pendant will be fixed before we make the light fitting. It is critical for us since the manner in which the fixture is mounted can make a big difference to the overall aesthetics of the product. In some circumstances we need to make bespoke brackets or create a frame to allow for variances that have occurred on site. If the fixture is for a public environment and is accessible on the ground, vandal resistance elements will influence the design of the product. We work closely with electrical contractors and value any feedback that will make installation on site as easy and effective as possible. When we manufacture interior fittings, we also work with ceiling contractors or shopfitters to provide in-factory solutions to reduce the amount of on-site work, which can compromise the

overall lighting effect if not accurate. In certain cases we develop a complete system design including frames and recessed housings that are cladded on site. This reduces the likelihood of the ceiling recess detail not being straight and thus meets the designer's requirements."

Not everything is done in-house; the company focuses on areas in which it has a competitive advantage and outsources the rest, so specialist suppliers are key. In many instances, Regent designs the fitting, sends out specific components for manufacture and then assembles it in-house and inserts the necessary lighting elements to attain the correct lighting effect.

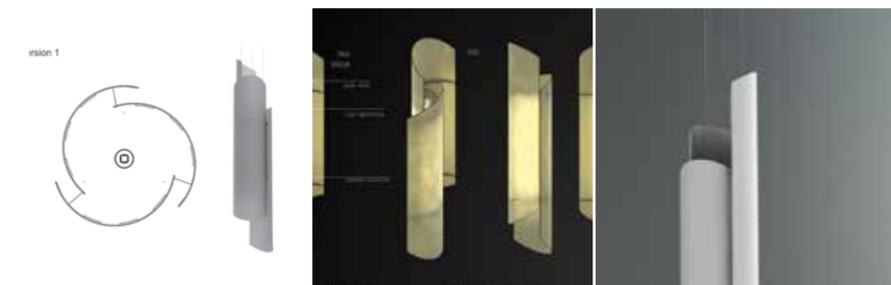
A further consideration is transportation of the fittings. Every special light fitting that is transported must be crated and customised packaging, which incidentally can cost well over R1000 per crate, is often essential to ensure that the specials reach their destination safely.

Why do specialised lighting when it is so time-consuming and often a 'once-off' with no future annuity lighting? Wahl says, "Customised lighting can be very effective for enhancing building design elements and it gives our design team the opportunity to learn more about different materials and lighting techniques. On occasion we have developed a special light fitting for a project and then used elements of the design to develop a standard, more functional light. From concept to the

*Mthatha Airport: From concept to completion Regent works with clients to create the ideal light fitting.*



*Elements of a special light fitting, such as this one for Centurion Mall, can be used for standard lights.*



*This fitting is a work in progress for Nelson Mandela Square.*



*Pamboukian light design worked with Regent to create these fittings for Woodlands Boulevard.*

completed product the process is iterative and often requires some compromise by all parties to accommodate sight or manufacturing parameters; having a professional team that is clear about its objectives and requirements makes the process much smoother.

Also, specialised lighting is the differentiator that keeps the company relevant. Wahl explains that the transition to LEDs has been radical and that by offering design solutions that clients require, the company remains viable. In addition, and as importantly, it is interesting, creative work. "We have invested heavily in design software and for our in-house designers it is stimulating to work on innovative and varied projects and products. It is a journey and the flexibility we offer allows us to learn from our clients and vice versa. By offering solutions we are able to develop long term relationships in our industry. The challenges associated are outweighed by the collaborative learnings.

### **Atrium on 5<sup>th</sup>**

Previously known as the Sandton Twin Towers, this 32 year old structure in the Sandton CBD underwent a major refurbishment during the course of last year. The outdated exterior of the building was transformed by the addition of a new façade and glass atrium linking the two towers across all floors. In a bold design move by the architects, the building's overhanging beams with recess windows were transformed by cloaking the building in a high performance double glazed unitised façade to lend it a modern, sophisticated feel. The building's glass façade has made it one the most eye-catching buildings in Sandton and the suspended glass atrium, a first in South Africa, has a light post tensioned steel work structure which is not visible through the glass sheeting.

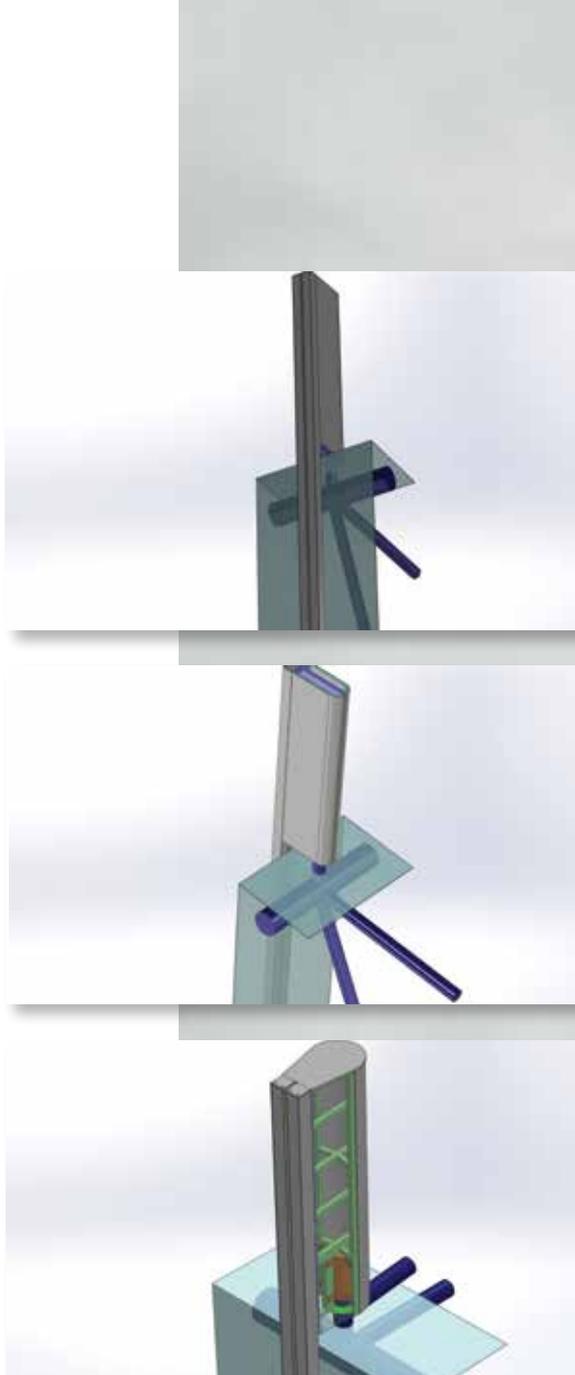
Pat Henry of MDS Architecture was the architect on the project and created a striking lighting feature to crown the top of the structure. Regent Lighting Solutions worked with him on the design and creation of the 'Tiara'.

The Tiara consists of 12 LED light fittings that stand proud of the glass façade at the front of the building – and range in height from around 6.7 m each to form the shape of the tiara – and a further 36 fittings that form part of the cladding crown around the circumference of Atrium on 5<sup>th</sup>.

The tubular fittings of the Tiara struts, which are made from aluminium, fit into a tubular steel frame that is attached to the glass by means of a special bracket that makes up most of the fitting. In comparison, the actual area of light is small.

The designer, Jose Loureiro and consultant Robert Alexander had to work closely with the architect and then the structural engineer to monitor how the uprights were being built and ensure that Regent's light fitting would fit. The extrusions had to be according to spec, and the whole design had to accommodate the wind loads that would be faced at the top of the edifice.

The project has been completed and the Tiara adds the final touch to this landmark building. LID



*Atrium on 5th*

