very year, the International Parking Institute (IPI) honors the best in parking design and programs with its Awards of Excellence, which have become something of an industry hallmark. This year was no exception. What was exceptional, however, was the number of truly outstanding entries that were received. Choosing a handful to honor was difficult to say the least.

Parking has come a long way in recent years; utilitarian concrete boxes have been replaced with art-filled community centers. Garages and surface lots have morphed into landmarks and neighborhood gathering spaces while serving as hubs between privately owned vehicles, cities, campuses, and other forms of transportation. No longer places to be dealt with as we go from here to there, parking structures and lots have become a pleasant part of the journey, doing their part to make our cities and towns greener, safer, and nicer places to be.

It is our pleasure to present the winners of the 2014 IPI Awards of Excellence, with our heartiest congratulations.

nspired by Paris's famous Centre Pompidou, this attractive structure invites all parking patrons to make their way to the street, reducing wayfinding confusion and making an excellent impression on city visitors. The garage's dramatic red diagonal staircase offers a clear path in or out, exercise, visibility, and security, and a spectacular ocean view. But that's just one feature that makes Parking Structure 6 a winner.

Parking Structure 6 is part of a strategic plan to retrofit, rebuild, and plan for future parking needs with a focus on sustainability. Its prime location in downtown Santa Monica, adjacent to the pedestrian-friendly Third Street Promenade, makes it a natural spot for visitors and residents alike to begin their days downtown.

The structure's façade functions as a light enhancement screen and was carefully crafted to invite natural light deep into the building. The portion that is unfolded has holes that allow low-angle light to pass into the structure and provide a high degree of visual transparency, both offering natural light all day long and minimizing the use of electric lighting. It has already become a city landmark, too.

Materials used in the structure are durable and easy to clean, and the panel system is resistant to the corrosive coastal environment. The structure was constructed with a big focus on sustainability and designed to meet LEED silver standards. It offers 744 parking spaces, including 11 accessible spaces and 15 van-accessible spaces, in eight above-ground and three-and-a-half below-ground floors; it can function as two separate structures when necessary. Enclosed bicycle racks on the ground can hold 72 bicycles, and an additional 40 can be held in bollards on

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the street. Thirty electric vehicle (EV) charging stations welcome alternate-fuel vehicles, and infrastructure was included for an additional 130 stations to be added in the future. Solar panels on the roof power much of the structure, which largely operates off the grid; it also features energy-efficient lighting systems and other energy-saving components.

Drivers and pedestrians alike are impressed with the structure, which keeps walkers safe on designated walkways separated from roadways. Drivers find a guidance system that displays car counts on each floor—those counts are exported to the city's website and smartphone app in real time. Automated payment systems keep congestion down at exits, and staff are employed

to serve as ambassadors instead of cashiers. A license plate recognition (LPR) system offers additional security and vehicle control.

The 2014 IPI

Awards of Excellence

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Best Design of a Parking Facility with Fewer than 800 Spaces

City of Santa Monica Parking Structure 6 Santa Monica, Calif. Owner: City of Santa Monica PROJECT PARTICIPANTS: Morley Builders, General Contractor International Parking Design, Architect of Record Miriam Mulder, City Architect Christopher Dishlip, Civil Engineer Frank Ching, City Parking Administrator PROJECT COST: \$45 MILLION



arking demand at Toronto's GO Ajax multimodal transit station had reached capacity, and while several surface parking lots were built in recent years, structured parking was chosen as a next step to accommodate future and present demand and make better use of the land. Constructed to serve patrons of the GOTransit station, this structure was designed to be an urban landmark and appears as a green box floating lightly above the ground, anchored by glass towers with an origami-inspired canopy above.

The upper three floors of the building were fitted with an array of green aluminum tubes installed vertically in a scalloped wave pattern. Pre-cast concrete columns serve as the visual bones of the structure. Structural

spandrel panels were installed on either side of perimeter columns to clarify the notion of an upper mass resting on columns below.

The lower levels of the façade were finished with an asymmetric system of perforated screens that appear as a cell-like pattern beneath the skin



of the tubes. Exit stairs and elevator cores serve both their practical functions and as wayfinding beacons. All these elements combined create a varied system of filters for light to enter the building.

This six-level structure houses 1,500 parking spaces and includes an elevator tower and canopy renewal program for the passenger rail platform and a new canopy system that connects the parking facility with an existing bus loop. The garage offers one inbound and one outbound path of travel and circulates the vehicles around two-way traffic flow on sloped ramps. Efficient circulation was a priority of the project, particularly around a Kiss & Ride area; a single unimpeded drive was designed to serve as a feeder there.

Best Design of a Parking Facility with 800 or More Spaces

Ajax GO Station

Toronto, Canada <u>Owner: GO</u>Transit, a Division of Metrolinx

PROJECT PARTICIPANTS:

- IBI Group, Architect, Architect of Record, Landscape, Civil Engineer, Planning, and Traffic Engineer
- Read Jones Christoffersen Ltd., Structural Engineer, Engineer of Record, and Parking Consultant

Kenaidan Contracting Ltd., Design Builder MCW Consultants Limited, Mechanical and Electrical Engineer

PROJECT COST: \$55 MILLION

The building's vehicle entrance and exit are located on one side, which is opposite to the pedestrian tunnel entrance to the rail platforms, isolating circulation flow and simplifying vehicular movement to street connections.

The cost to build this structure was about \$30,000 per space, which is comparable or less expensive than other structures in the area. This was done thanks to use of a pre-cast concrete structural system, while durable materials were employed to minimize future maintenance costs.

Designers aimed to meet LEED silver requirements, and sustainable initiatives in the structure include erosion control, waste management, use of regional content and recycled construction materials, low-emitting materials, and low water consumption, along with efficient lighting systems and controls. A white membrane roof was designed to both mitigate snow removal costs and accommodate photovoltaic panels that connect to a net metering system. EV charging stations were incorporated in the building and a stall sensor system lets patrons know where open spaces are available.



esigned to set a new sustainable precedent for the Toronto Parking Authority (TPA), this 43-space carpark was built to meet and exceed the city's development and greening standards for surface parking facilities. Working with the local community, the city's goal was to meet short-term parking needs while offering an aesthetic improvement to the neighborhood.

The lot was designed to be barrier-free and easy to navigate. A handicapped parking stall was located adjacent to a pay-and-display machine at the main entrance, and a series of masonry seat walls front a walkway. Plants and ornamental metal screen the parking area while offering a natural visual landscape for the neighborhood.

A variety of elements were incorporated into the lot to accomplish a sustainable and attractive end product. These include a paving area along the north property line that offers both pedestrian connections and a seating area that was requested by the community. Raised concrete planting beds screen the parking area from neighboring properties, reduce salt damage, and protect neighbors from pedestrian foot traffic. Native plants were chosen for their year-round interest and ability to screen, while permeable pavers create a sustainable stormwater management system. A combination of high-albedo surface materials and tree plantings was designed to reduce the urban heat island effect, and a unique living wall provides a green fence made of five beautiful willows.

of a Surface Parking Lot

Carpark 251, 201 Claremont Street Toronto, Canada **Owner: Toronto Parking Authority PROJECT PARTICIPANTS:** Marton Smith Landscape Architects, Architect EGF Associates, Planner Cook Consulting Engineers Limited, Stormwater Management Mopal Construction Limited, General Contractor PROJECT COST: \$510,840

Two pay-and-display machines offer credit card or cash payment, and the lot features a variety of lighting solutions that illuminate both parking spaces and walkways. It features a continuous loop design with stall layout at 90 degrees, along with generous stall dimensions for ease of use. Directional signs were installed throughout the neighborhood's main streets, while four bike rings were installed onsite in a highly visible location. Lighting is photocell-controlled to automatically adjust with natural light.

Community involvement was key in the construction of this lot. As a result of community input, the TPA altered the original carpark design to incorporate extensively landscaped areas and the walkway and seating that turn it into a neighborhood space. The final product was applauded by the neighborhood, which values both its parking and its gathering potential.

Best Parking Facility Rehabilitation or Restoration

Memphis International Airport Ground Transportation Center

Memphis, Tenn. **Owner: Memphis Shelby County Airport** Authority

PROJECT PARTICIPANTS:

- Walker Parking Consultants, Inc., Project Management, and Parking Consultant and Structural Engineer
- OGCB Incorporated, Electrical Engineer of Record
- LRK, Inc., Concept Architect
- Self + Tucker Architects, Architect of Record Parsons Transportation Group Inc.,

Program Manager

Walker Restoration Consultants, Inc., **Restoration Engineering**

Flintco, Inc., General Contractor

- Clark Dixon Associates, Graphics and Wayfinding
- GALA Engineering, Mechanical and Plumbing
- Pickering Firm, Inc., Roadways/Civil Engineering
- Ritchie Smith Associates, Landscape Architect
- **PROJECT COST: \$16 MILLION**

n a unique renovation, parts of an existing short/long-term parking structure at Memphis International Airport were removed to create an atrium that incorporates a pedestrian plaza with moving walkways that connect the terminal with new and pre-existing parking. The walking distance to the terminal was reduced by incorporating 480 feet of moving walkway underneath attractive fabric canopies designed to match the airport terminal's iconic champagne flute sculptures. They are illuminated by LED fixtures controlled by a photocell, which reflect diffused light back onto the plaza. Glass canopies at each end of the fabric structures offer weather protection, and the plaza area features water features, landscaping, hardscaping, and music by local artists.

Existing parking structures were renovated and received concrete repairs, traffic-topping recoat and replacement, latex-modified overlay, re-striping, expansion joint repair/replacement, and floor strengthening to support valet operations.

A PARCS system was reorganized to integrate the new parking facilities, and a new valet sub-system allows curbside drop-off and pick-up, tracking vehicles from the time they are picked up by attendants until they're returned to their owners. A new LPR system captures photos of vehicles at entry and exit, and wireless handheld devices track vehicles through control points.

Three tunnels connecting the existing garage to the terminal were upgraded with stone glass panels, metal panel



ceilings, terrazzo floors, thermoset resin panels, and cove-mounted LED strip lights that produce asymmetrical lighting that accents the finishes.

Most demolition work was performed at night, but the Federal Aviation Administration limited the use of tall construction equipment and large floodlights; the contractor used a combination of concrete wet saws, jackhammers, and crushers to control dust, noise, and scrap value. Contractors also scheduled projects around high-traffic holiday seasons and shielded open areas of the garage from construction areas with full-height plywood boards that were decorated to mask as closure walls. The entire project was driven by a focus to get people into and out of the airport seamlessly.



Innovation in a Parking Operation or Program

LADOT Express Park

Los Angeles

Owner: City of Los Angeles, Department of Transportation

PROJECT PARTICIPANTS:

LADOT Parking Meters Division, Project Manager Xerox State & Local Solutions, Prime Contractor

Xerox Innovation Group, Pricing Engine Developer

PROJECT COST: \$18.5 MILLION

Express Park was a U.S. Department of Transportationsponsored demonstration project and aims to relieve traffic congestion, reduce air pollution, and improve transit efficiency by applying the principles of demand-based pricing.

This complete intelligent transportation system employs vehicle sensors and a real-time parking guidance system to optimize the use of public on- and off-street parking in the downtown area.

Los Angeles has approximately 6,300 on-street metered parking spaces in the project area that, until this project started, offered consistent pricing during daily enforcement hours with variety dictated by broad zones. High-demand areas had little parking availability, and low-demand areas were underused.

Sensor data showed that

in many areas, demand for parking remained high for an additional two hours after enforcement ended, so enforcement was extended by that much time. Fixed rates were established by blockface demand rather than large zones, and three Monday-Friday pricing periods were then put into place with a single all-day Saturday rate. Each block's pricing is now set based on occupancy thresholds and designed to increase parking availability and reduce the need to circle for parking. Surveys and analysis found that demand has shifted to lower-priced, lower-occupancy areas, and that 76 percent of drivers would park in less-expensive areas nearby rather than higher-priced spaces. Parking



demand was brought into line with supply in both congested and under-used block faces without hurting parking revenue.

This project brought all the technology into a single

information system that allowed the user to manage parking resources intelligently. Some innovations were used for the first time anywhere, including:

- A pricing engine driven by a unique set of algorithms that calculates an ideal block rate by demand and time of day.
- A complete parking guidance system with a web-based application to identify available parking locations, prices, and policies; apps that guide parkers to available parking; on-street dynamic signs that report availability; and an interactive voice response system for locating parking.
- The ability to set parking rates in real time based on current demand.

Award for Architectural Achievement

Park Place

Missoula, Mont. Owner: Missoula Parking Commission **PROJECT PARTICIPANTS:** MacArthur, Means & Wells, Architect Missoula Redevelopment Agency, Partner/Project Manager Gordon Construction, Contractor Carl Walker, Parking Consultant/Structural Engineer Beaudette Consulting Engineers, Structural Engineer WGM Group, Civil Engineer Landscape Architecture Studio, Landscape Architect

PROJECT COST: \$7.86 MILLION

ark Place is a five-level, 333-space public parking structure with 3,000 square feet of retail space in the heart of Missoula, Mont. Five design goals were established for this project:

- It should be fresh, urban, and progressive.
- It should support the urban design and economic vitality of the city and help activate the street.
- It should maximize the number of parking spaces per dollar, considering both construction cost and life-cycle costs.





- It should be parker-friendly: easy to navigate, light and bright, and safe and accessible.
- It should demonstrate municipal stewardship for the environment.

The small site dictated a single-helix design with two-way flow. A post-tensioned structure increases the sense of height and airiness inside and improves slab durability. Cast-in-place concrete maximizes the use of local materials and labor, and the project is net-zero, with a photovoltaic array that completely powers it. State-of-the-art lighting and controls systems and a green elevator reduce electrical load by 64 percent from energy code standards.

In good weather, the project's outside deli seating area is filled with patrons. Cut-off light fixtures were used to provide appropriate light levels while complying with the city's dark sky ordinance; lighting and signage are concentrated at pedestrian and vehicle entry points. Landscaping connects the building to place, recalling the rivers that formed the Missoula valleys. The project also incorporates public art, including an installation selected for its scale and relation to the building and landscape; it is an abstraction of waves in a river.

The parking commission's new logo appears as 12-foot diameter wayfinding signs on the most prominent corner of the building. The signs were carefully integrated with the swoop of the artwork and have become a prominent feature of the façade design.

Land had to be purchased from a reluctant-to-negotiate corporation and a nearby hotel. Ultimately, the project became a model of cooperation between public and private sectors.



Expand your vision

Tightening budgets and rising personnel costs make the need for business intelligence today not a luxury but a necessity. Imagine you have a parking system that does more than manage your pay stations. It enables you to identify opportunities, take action, and measure results. Now imagine you have a system that sits above your various parking technologies. It delivers operational insight and empowers you and your field personnel to make informed decisions that increase efficiencies, productivity, and the bottom line. That system has arrived.

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he Boston Common Garage, a 1,300-space facility beneath America's oldest public park, is as green below as it is above. From new EV charging stations to a partnership with Zipcar, this is one of the most environmentally friendly parking structures in Boston.

Cashier booths at entrances and exits were removed and replaced with pay-on-foot kiosks at all four elevator banks. Automatic vehicle identification (AVI) readers were installed to read EZ Pass transponders for monthly parking patrons, significantly reducing vehicle idle times and carbon emissions.

Comingled recycling receptacles were installed to capture everything from newspapers to plastic, glass, and fiberboard and keep all those materials out of the



Award for New Sustainable Parking & Transportation Facilities Excellence

Boston Common Garage

Boston

Owner: Massachusetts Convention Center Authority

PROJECT PARTICIPANTS:

- Massachusetts Convention Center Authority, James E. Rooney, Executive Director
- Massachusetts Convention Center Authority, Fred Peterson, Director of Facilities Operations
- Dave Levesque, Amano McGann, Account Manager
- Sammy Yemane, SP+ Corporation, Facility Manager
- PROJECT COST: \$508,989

trash. Bins were placed at each egress point for customers, reducing waste diversion by two tons as a result. Additionally, EV charging stations and priority parking spaces for hybrid vehicles were added in a "green zone" on the middle level of the garage. The new green area is branded and very close to the entrance and exit ramps. Wayfinding signs lead drivers to the area, which can also be used by Zipcar hybrid or plug-in vehicles; Zipcar's on-site fleet added several Honda Accord plug-in hybrids at the same time. There is also priority parking for hybrids at each of the garage's four entrances. Charging stations were funded through a U.S. Department of Energy grant. Energy-efficient lighting completes the sustainable picture; goals were met and will be continued in the future. O



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