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For Immediate Release

New Birdair structures to serve up predictability and a new iconic aesthetic at 2016 US Open

Arthur Ashe Stadium's new retractable roof highlights enhancements to USTA National Tennis Center

As the 116th US Open Championships approach on August 29, Birdair, Inc. is pleased to announce the completion of a series of renovations to the USTA Billie Jean King National Tennis Center in Flushing Meadow-Corona Park in Queens, New York.

These enhancements include Arthur Ashe Stadium's new retractable roofing system with 210,000 square feet of [polytetrafluoroethylene \(PTFE\)](#) membrane, as well as the completion of the new Grandstand Stadium, which features a façade flanked with 27,000 square feet of PTFE-coated mesh façade and a 23,000-square-foot solid PTFE-coated fiberglass membrane cantilevered roof system. The recent renovations also include a new 3,900-square-foot PTFE fabric canopy for its Mojito Bar & Restaurant, fabricated and built by Birdair. Thanks to Birdair's contributions to the design, fabrication and installation of the new tensile fabric structures, the 2016 US Open events will benefit from enhanced shading and a reinvented iconic aesthetic, all without sacrificing daylight or circulation.

"The whole concept was to really speak to the spectacle of the US Open experience," says Sande Frisen, AIA, Technical Design Lead & Associate at ROSSETTI architects. "Signature elements like Arthur Ashe and Grandstand now anchor that experience."

With the addition of the new retractable roof, Arthur Ashe joins Wimbledon Stadium and the Australian Open's Rod Laver Arena as tennis Grand Slam venues with dynamic roofing solutions. The French Open expects to add a retractable roof within the next decade.

"Our whole team is extremely pleased with how the project turned out," says Doug Radcliffe, Project Manager, Birdair North America. "The US Open has highly specific performance requirements and tensile architecture was an ideal solution."

The Arthur Ashe Stadium is an iconic tennis facility and home to one of the most prestigious events in tennis," said Doug Radcliffe, Project Manager, Birdair North America. "We are confident that Birdair's innovative PTFE membrane roof will add beauty, protection and increased functionality to the stadium."

The new roof, expected to be used only for rain, opens at a top speed of 25 feet per minute, despite being the size of 17 Olympic swimming pools. It also features a chilled water ventilation system to control humidity when closed. Aesthetically, the roof also sports around 360 LED sports lights to illuminate the facility when closed, and also features the name and logo of Chase bank on the roof's north and south sides.

“The new structures look spectacular,” adds Daniel Zausner, Chief Operating Officer of the USTA Billie Jean King National Tennis Center.

The project was completed in early August thanks to an intensive collaborative effort between Birdair's team, USTA leadership, [ROSSETTI](#)—the original architect for Arthur Ashe Stadium—as well as engineering firm [WSP](#), general contractor [Hunt](#) and mechanization engineering firm [Geiger](#).

The Challenge: Ashe Built on Ash

Adding a roofing system had long been a consideration for Arthur Ashe Stadium, and with five straight years of weather delays between 2008 and 2012, it became clear that a roofing solution was needed. However, due to the size of Arthur Ashe Stadium—it seats 23,771 fans—combined with the site's swamp-like soil (the area was previously a coal ash dump for Manhattan), it was essential to identify an exceptionally lightweight roofing solution.

Starting in 2004, the USTA conducted four studies in order to find a solution—with little success—eventually consulting with every architect involved in the design of a stadium roof in North America. The winning plan came from ROSETTI in 2010, featuring a lightweight PTFE structure from Birdair as an integral component. Eight columns sit on concrete bases, each of which is supported by 20 piles driven 150 to 200 feet deep. The lightweight PTFE roof closes from two sides on glides.

PTFE, or polytetrafluoroethylene, is a Teflon[®]-coated woven fiberglass membrane that is extremely durable, weather resistant and exceptionally lightweight compared to competing roofing materials. “Even when the roof is closed, the Birdair PTFE fabric still creates this open, airy feel,” says Frisen.

A Grand Plan

The recently completed renovations to Arthur Ashe Stadium are part of the National Tennis Center's five-year strategic transformation plan, to be completed in 2018.

These enhancements also include the new, 8,000-seat Grandstand Stadium—previously 6,000 seats—which features a façade flanked with PTFE-coated, leaf-patterned mesh, as well as a horizontal canopy roof with a PTFE-coated fiberglass membrane. These structures provide additional shade for spectators while still maintaining the venue's intimate atmosphere.

“The brand new Grandstand still does all the great things the old one did,” says Zausner.

Additional enhancements for the 2016 US Open include widened walkways connecting Court 17 to the new Grandstand, as well as ten rebuilt field courts. In 2018, the transformation plan is expected to be completed with the debut of the new Louis Armstrong Stadium, which will also include a retractable roof; the old Louis Armstrong Stadium, currently slated for demolition, had been the event's primary venue prior to 1997.

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***About Birdair:** Birdair, Inc. is the leading design build contractor of custom tensile structures throughout the world. In addition to pre-construction services such as design assistance, budgeting, construction methodologies and project scheduling, Birdair provides design build solutions in all aspects of project design, fabrication, installation and maintenance. The company offers a selection of architectural fabric membranes, including PTFE fiberglass, ETFE film, PVC and Tensotherm[™], an insulated tensioned membrane system. Birdair, based in Buffalo, NY, is a member of the Taiyo Kogyo Group, with operations serving North and South America and other international locations. For more information about Birdair, [like us on Facebook](#), call 1-800-622-2246 or visit www.birdair.com.*

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