



nerej

Project of the Month: Arcadis IBI Group completes restoration and repair of Boston's iconic Christian Science Plaza

November 18, 2022 - Construction Design & Engineering



Boston, MA Arcadis IBI Group has completed a multi-year restoration and repair project for the Christian Science Plaza, one of Boston's most iconic urban landscapes. The Reflecting Pool, a defining feature of the plaza, reopened to the public after vast infrastructure improvements and design enhancements, making the plaza more accessible and welcoming year-round. Arcadis IBI Group led a multi-disciplinary consulting team for the overall revitalization of the landmark Christian Science Plaza, which was designed in the 1970s by architects I.M. Pei & Associates and Araldo Cossutta, Associated Architects, and landscape architects Sasaki Associates. The project has already won three awards: The Boston Society of Landscape Architects Honor Award, a Boston Preservation Alliance Award, and an ACEC Award.

The Christian Science Plaza is the largest privately-owned publicly accessible open space in Boston. This 13.5-acre open space is associated with a mid-century update to The Mother Church and world headquarters of The First Church of Christ, Scientist (TFCCS). The plaza restoration and repair project, the first major overhaul in 45 years, focused on the evolution of this urban site for future generations, with an emphasis on repairing and restoring its character-defining landscape features, enhancing the public open space, and improving environmental sustainability.

"More than a beautification effort, the Plaza renovation exemplifies our larger goal of allowing the space to serve as a peaceful place of quiet reflection. Literally and figuratively the outcome of the project is a space that invites prayerful contemplation and serves as a thoughtful doorstep to the

church edifices and the 'How Do You See the World?' exhibit spaces in the Publishing House," said Brooke Ten Eyck, senior project manager at TFCCS.

Sustainability was a key driver to the design approach of the project and especially the Reflecting Pool, whose state of disrepair contributed to an unsustainable loss of potable water each year caused by leakage into the garage below. To reduce water consumption, the Reflecting Pool was completely dismantled to replace the waterproofing of the garage deck roof below and rebuild the basin of the water feature to prevent future leaking. The reconstruction enabled the design team to reconsider the original pool design, resulting in a new concept that provides year-round beauty for the five months when the pool is usually empty, while also establishing extensive water conservation and management measures throughout the site.

The Reflecting Pool was rebuilt with an improved basin paving that enhances reflectivity and four-season interest. The original concrete bottom was replaced with more than 13,000 granite pavers in two sheens of reflective finish, laid to form concentric circles like ripples that seemingly "disappear" when water is in the pool yet provide a honed table-top look of dark granite that extends the reflective quality of the pool into the winter. To support the water management strategy, the reconstructed pool was made shallower, decreasing its depth from 27 to 8 inches and reducing by two-thirds the amount of water required annually. By slightly shortening the length of the 700-foot pool by a mere 16 feet on the southwestern end, the plaza was made more accessible and welcoming to pedestrians from Huntington Ave. Additional sustainability improvements throughout the plaza include stormwater management measures to capture 14 million gallons of rainwater and decrease municipal water consumption. The replacement of pavement and hardscape materials with green space and pervious surfaces will reduce heat retention and cut stormwater runoff by half. The annual water consumption for the Reflecting Pool has been reduced by roughly 70%.

"Our landscape designers are passionate about instilling energy and imagination into our work, and we are proud that our design will change the whole paradigm of how water resources are managed on the Christian Science Plaza," said John Amodeo, ASLA, principal at Arcadis IBI Group. "The creation of full-scale mock-ups of the Reflecting Pool basin, as well as the use of virtual reality as a design tool, allowed us to provide an immersive and interactive 3D design experience for all project stakeholders, an approach that fostered a collaborative design experience for all. We feel privileged to play a role in the restoration of this cherished open space."

Additional key elements of the project were to make the Plaza entrances more welcoming and to increase the footprint of green space. The defining geometry of the site was preserved, while perceived barriers at the edges were thoughtfully removed to establish more clearly defined and accessible gateways. To contribute to a more open feel and provide safer pedestrian access, the design included the creation of a new access point from the Back Bay/Prudential Center and an enhanced gateway on Westland Ave. Pedestrian circulation and accessibility have been improved through grading and drainage, paving, and lighting renovations.

A new lighting master plan maximizes the existing lighting elements with energy efficient LED lighting to illuminate the Plaza. Unified light sources and improved wayfinding contributes to a more welcoming atmosphere. The addition of a tilted lawn edged by new seatwalls, a sunken garden, and custom wood and granite furniture designed to integrate into the historic elements have expanded seating opportunities throughout the Plaza.

Arcadis IBI Group consulted with specialists to bring sensitivity to the historical preservation of the Christian Science Plaza, which was designated a landmark by the Boston Landmarks Commission in 2011. The design restores existing hardscape, seating, lighting, and reflecting pool elements while introducing a new complementary palette of materials and site furnishings that blend with historical features and elevate The Mother Church as the focal point of the Plaza.

“Our stewardship of this exceptional urban site prompted a thoughtful design and strong technical approach for its restoration. From the beginning, Arcadis IBI Group recognized the historical and place-making challenges of the project and applied expertise and loving care to create a more welcoming and reflective plaza for all to enjoy.”

New England Real Estate Journal - 17 Accord Park Drive #207, Norwell MA 02061 - (781) 878-4540