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## **Arrowstreet's MIT Sustainable Roof Study and Planning Tool receives national honor from the SCUP Excellence Awards Program**

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Boston, MA According to Arrowstreet Inc., its MIT Sustainable Roof Study and Planning Tool is the recipient of a national honor from the Society for College and University Planning's (SCUP) Excellence Awards Program. The award was announced at SCUP's national conference which was held in Nashville.

The study and planning tool allows MIT to develop campus plan strategies and prioritize improvements that lower greenhouse gas emissions, maximize energy savings, improve storm water management, increase biodiversity, reduce the urban heat island effect, increase energy production, and provide more educational/research opportunities.

"Sustainable innovations are essential to future proofing buildings and the environment," said Arrowstreet principal Laurence Spang. "The Sustainable Roof Study and Planning Tool will allow MIT to integrate sustainable design and resiliency goals into their capital improvement planning in a new and holistic way. We are pleased this project will assist one of the country's most prestigious university's in achieving their sustainability goals and are honored that SCUP has recognized the value of the project with this award."

Consistent with MIT's Plan for Action on Climate Change that includes several initiatives focused on the goal of reducing campus carbon emissions by 32% by 2030, Arrowstreet was commissioned to perform a study and develop a tool that evaluates options for making MIT's campus buildings more sustainable. The campus is 169 acres and is comprised of 133 buildings with more than 2.5 million s/f of roof area over 42% of MIT's land area. The project team included Arrowstreet; Arup, sustainable design; Simpson Gumpertz & Hager (SG&H), structural and building envelope; and PM&C, cost estimators.

To develop the tool, Arrowstreet and SG&H completed an existing conditions survey for 20 buildings chosen by MIT, evaluating the roof conditions and building structure. Incorporating the data into a database developed by Arup, the team created the Roof Sustainability Planner Tool. The tool includes a lifecycle cost analysis and gives a snapshot of cost and energy reduction. It also provides data for potential cost savings for each building (as determined by roof type). The information and tool outputs provide MIT with information to assist in campus planning, capital improvement recommendations and sustainability decisions.

The tool is used by teams in MIT Campus Construction, Maintenance and Utilities, Campus Planning and Office of Sustainability and has become part of MIT's workflow in decision making for their annual roof replacement program.

The project team worked closely with the university to identify overall goals for creating sustainable roofs on MIT's campus. Goals included: demonstrating MIT's commitment to sustainability; educating the Institute and the public about the benefits of renewable energy generation; utilizing roofs to generate electricity; responding to the city's efforts to mitigate flooding and temperature rise, and providing education and research opportunities to the MIT community.

Arrowstreet is well-known for its work in sustainability such as the King Open/Cambridge Street Upper Schools in Cambridge, MA, which is designed as the first Net Zero Emissions School, and largest Net Zero building in Massachusetts. As part of Cambridge's Net Zero Cambridge plan, the school includes many green elements such as geothermal wells, which are dug deep into the earth and provide heating and cooling for the building.

The SCUP awards highlight that strategic, integrated planning can result in exemplary buildings, grounds, institutional success, and careers that inspire. The SCUP jury received 156 entries from 32 states and five countries within a range of eight sub-categories of planning, landscape and architecture, and selected eight Honor, eight Merit, five Honorable Mention and three Special Citation entries to award this year.

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