

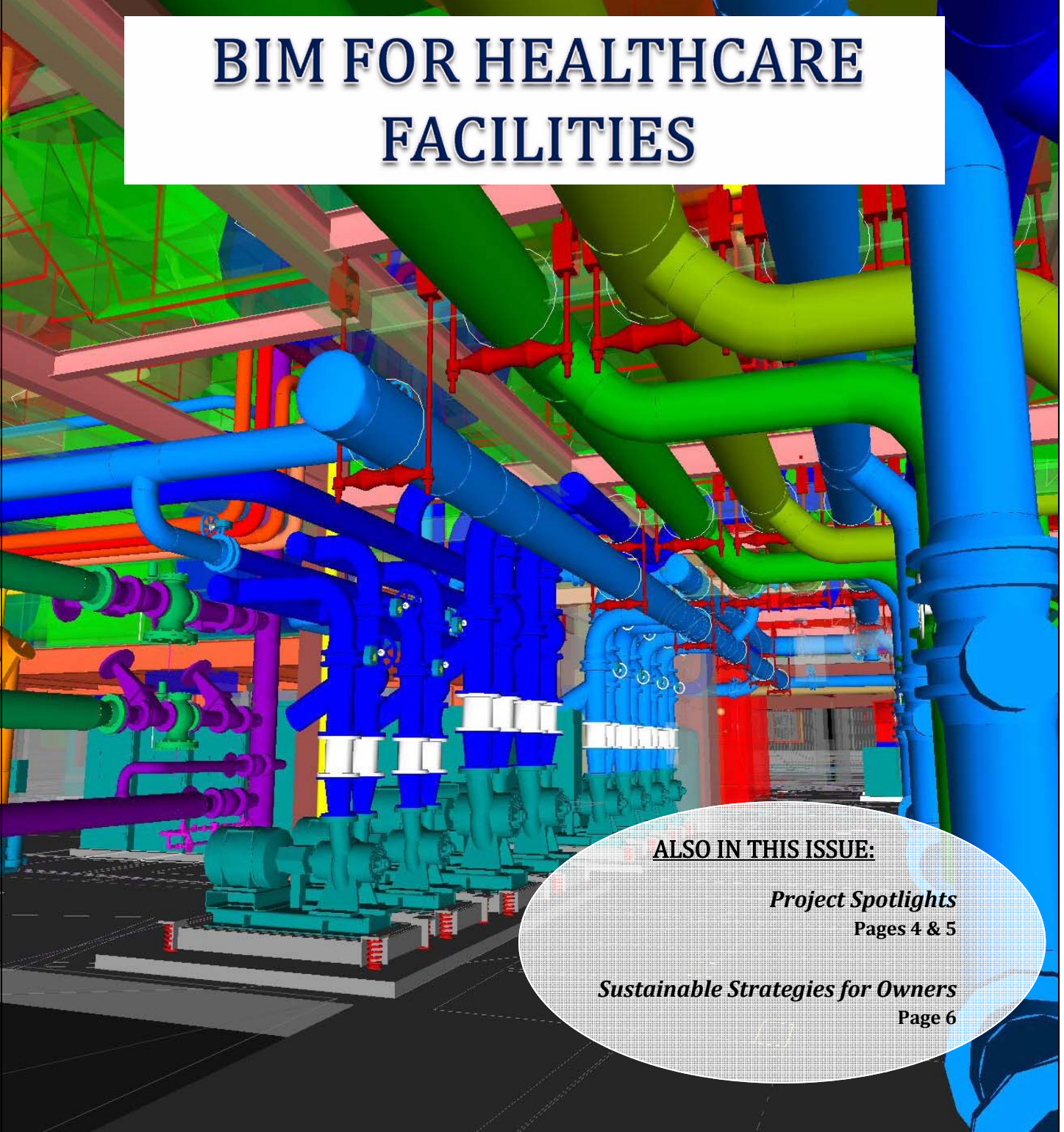
SHOP TALK

Summer 2009

The quarterly newsletter of J.C. Cannistraro, LLC

Issue 8

BIM FOR HEALTHCARE FACILITIES



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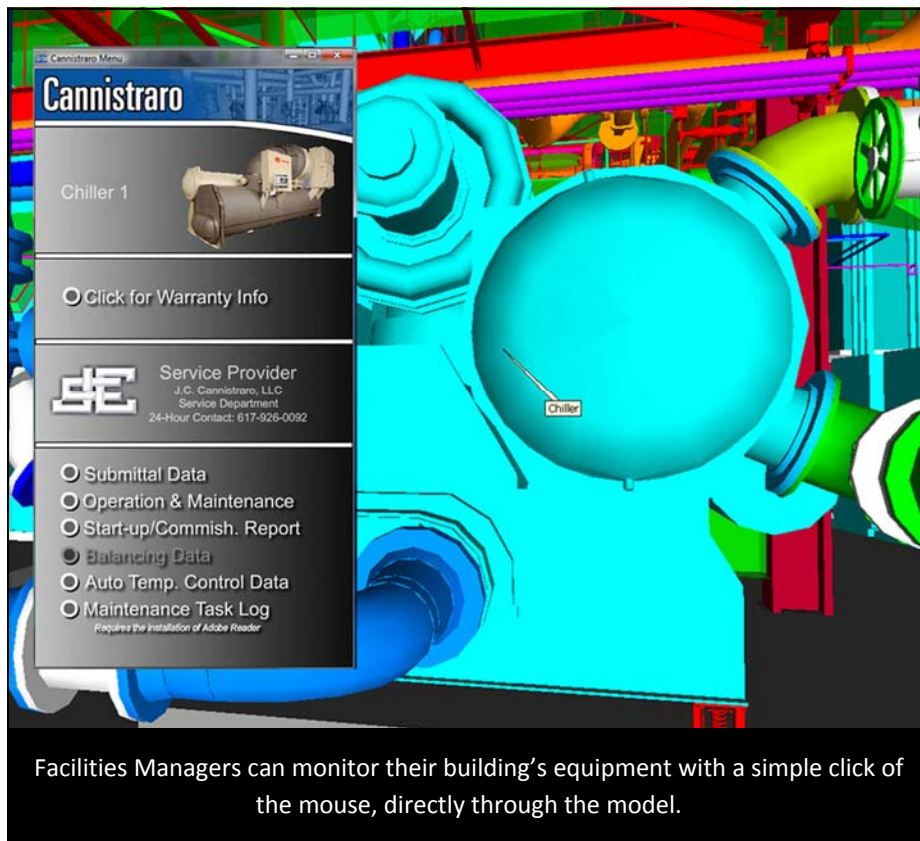
BIM FOR HEALTHCARE FACILITIES

Cannistraro Builds a Model for Success at MGH

The world-class “Building for the Third Century” at Massachusetts General Hospital has raised the bar for healthcare institutions. The LEED-certified, new inpatient facility will encompass a total of 530,000 square feet and is budgeted at more than \$500 Million. At the center of this thirteen-story building, is a 40,000 square-foot floor designated solely for its mechanical infrastructure.

J.C. Cannistraro, LLC is performing the HVAC and Plumbing work for this challenging project. Located within the hospital’s existing urban campus, space for the new development is limited. “The Building for the Third Century is driven by the project schedule,” explains JCC Project Executive Bill Fitzpatrick. Building Information Modeling (BIM) has enabled the Cannistraro team to blend the traditional coordination process with scheduling and pre-fabrication to piece together the project puzzle. “What made this project challenging,” Fitzpatrick continues, “was the overall lack of space on site to store equipment or maneuver materials. Such a scenario required pre-fabrication and expert scheduling for installation.”

Through the use of its state-of-the-art pre-fabrication facility, Cannistraro is able to provide time and cost savings to building owners by pre-fabricating the bulk of the work off-site and early in the construction schedule. On this project, coordinating and installing equipment into the mechanical room was particularly intricate, as the room was located in the middle of the building.



Facilities Managers can monitor their building’s equipment with a simple click of the mouse, directly through the model.

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BIM FOR HEALTHCARE FACILITIES

(continued)

In collaboration with *Thompson Consultants, Engineered Solutions, NBBJ Architects, Partners HealthCare System* and *Turner Construction*, Cannistraro worked to ensure that the project was fully coordinated using the best methodology available. By assembling the project team early, the architect, engineer, owner, subcontractors and construction manager used design-assist to ensure accuracy of construction documents.

When a project is ready to be closed out, the same model (including equipment details and operations and maintenance manuals) can be handed over to the owner for facilities management purposes. The accuracy of the BIM model will aid facilities managers in the operation and maintenance of their buildings. There are many benefits associated with managing the design and energy efficiencies of their mechanical infrastructure from their desk. The model becomes a live database that contains information on the facility's systems throughout the course of the building's lifecycle. Facilities managers can then monitor operating and energy costs by projecting equipment workloads and analyzing the measurements generated by the building model. For healthcare facilities that are often expanding, the use of BIM inherently provides as-built drawings that are needed for future build-outs and renovations.

Cannistraro is taking BIM to the next level through 4D and 5D coordination. Manpower loaded schedules are entered into the model to simulate exactly how construction will proceed and when each trade will begin and end work. BIM also facilitates cost estimating accuracy. Pre-fabricated deliveries will be labeled with identification tags or Radio Frequency Identification Devices (RFID) to add an inventory management component to the job site BIM model. At that point, a contractor can monitor exactly what materials have arrived at the job site, view a current model of the building as it stands, as well as an up-to-date model of the building completion and costs to date. The Building for the Third Century at Massachusetts General Hospital is a real life example of how BIM is transforming conventional construction practices. As more success stories emerge about the use of BIM, hospitals and laboratories will seek BIM-savvy project teams to build their hi-tech facilities.

"The accuracy of the BIM model will aid facilities managers in the operation and maintenance of their buildings. There are many benefits associated with managing the design data and energy efficiencies of their mechanical infrastructure from their desk."

(As seen in High-Profile Monthly — June 2009)



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PROJECT SPOTLIGHT

TUFTS SCHOOL OF DENTAL MEDICINE

In September 2009, work will wrap up at the Tufts School of Dental Medicine in Boston, MA. A vertical expansion of 5 additional stories was built onto the existing urban campus, and J.C. Cannistraro was brought in to provide the medical gas infrastructure. The expansion adds approximately 95,000 square feet of classrooms, clinical rooms for patient care, office space, plus rooms for research and development. The project team consists of *Shawmut Design & Construction* and *ARC/Architectural Resources Cambridge*, and *BR + A*.

Cannistraro crews, led by Project Manager Larry Keefe, designed, pre-fabricated and installed a complete dental vacuum system for this existing facility. The project also included a compressed air system plus a new hot water system and equipment.



Pre-fabricated, stainless steel process piping is ready for delivery.



Aerial view of the vertical expansion project at Tufts Dental
(Photo: <http://dental.tufts.edu>)



Pre-fabricated piping assemblies are installed on the job site.

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PROJECT SPOTLIGHT

NEW ENGLAND AQUARIUM

The craftsmanship of Cannistraro plumbing systems was on display this spring at the New England Aquarium. Plumber Sean Davis was charged with creating a custom design and installation strategy for the Marine Mammal Center. This new addition features a series of ocean water pools for live seal demonstrations. This complex piping system was specially designed to operate with equipment from *Aquatic Environments*, a firm that specializes in life-support systems for aquariums and marine science centers. *Shop Talk* got an exclusive tour of the project site including the main pool, the holding pool, the equipment room/pump station, and the rooftop piping stack. The Cannistraro crew is wrapping up this specialty work in the coming weeks, and seal feedings and demonstrations begin later this summer.

General Contractor: Turner Construction



Plumbing Superintendent Neil Daly gives Sean Davis the Cannistraro "Seal" of approval.



Custom design and installation optimized this unique piping system. The freshwater pool is the main stage for live shows.

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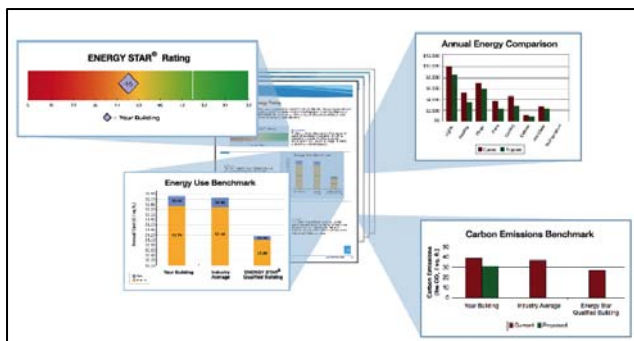
SUSTAINABLE STRATEGIES FOR BUILDING OWNERS

When calculating the cost to own and operate a building, research shows that energy accounts for approximately 21% of total operating costs. Nearly half of those energy costs can be attributed to the building's heating and air conditioning.

At J.C. Cannistraro, we believe that there is an opportunity for energy savings in all buildings. Our Service and Maintenance Department can help building owners increase profitability, add value to their assets, and lower operating costs. Through comprehensive building performance analysis, our trained service technicians will find sustainable solutions that will also make life easier for facilities managers.

Our signature building performance analysis allows facilities managers to:

- Assess the energy usage of a facility
- Analyze actual and projected energy costs
- Identify a building's expected Energy Star Rating
- Analyze the outdoor and indoor conditions of a facility
- Assess the temperature and air quality of a building
- Make informed decisions about the future of a facility



Building Performance Analysis provides charts for owners to monitor energy and equipment efficiencies.



Email sustainability@cannistraro.com to schedule a building performance analysis with a technician today!

Five Become LEED APs



Joe Mierzejewski

Project Manager



Paul Battaglia

Project Manager



Mike Cannistraro

Vice President of Engineering



Kourtney Thomas

Assistant Project Manager



Chris Wyand

Project Manager

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SAFETY UPDATE

Cannistraro Introduces Stretch & Flex

J.C. Cannistraro continues to maintain an unwavering commitment to safety both on and off the job site. This summer, under the guidance of Safety Director Denise Guillette, the company kicks off its all-new **Stretch and Flex Program** for all field management and field personnel.

The term “industrial athlete” is sometimes used to show the correlation between physical activities and the risk of injury. If you are a worker or an athlete, you could have the same outcome if you are injured on or off the job.

JCC employees perform physical activities while at work whether they are in the fab shop or on a project. The **Stretch and Flex Program** will help employees maintain physical health and conditioning, increase their flexibility and overall range of motion, reduce the risk of fatigue and prevent work-related injuries.



ABOUT CANNISTRARO STRETCH AND FLEX:

- Teaches a 7-step warm-up to get the blood flowing that takes about 5 minutes to perform
- Teaches 11 easy-to-perform stretching exercises that take about 5-10 minutes to perform
- Incorporates exercises that help target muscles used in a wide range of physical activities performed by JCC employees.

Safe Job of the Quarter



Arrowstreet and VMY Vitols Architect's rendering of the 50 West Broadway Residences in South Boston

Congratulations to the project team at **50 West Broadway** in South Boston for earning the “Cannistraro Safe Job of the Quarter Award” for Q2, 2009. This 3-trade project for *John Moriarty and Associates* has demonstrated a commitment to on-the-job safety and continues to set an example for overall project safety.

Plumbers, pipefitters and sprinkler fitters at **50 West Broadway** job site will be treated to a catered lunch in honor of their efforts. Project Managers and Foremen in each trade will also be presented with a Safe Job of the Quarter Certificate of Achievement.

Congratulations to the entire project team!

SHOP TALK

FIVE MINUTES WITH PHYLIS BRUNET



Talented, dedicated employees and strong family values are the two main components of Cannistraro corporate culture. Few people understand what it means to work for Cannistraro better than Plumbing Coordinator Phylis Brunet, who is beginning her twenty-first year at J.C. Cannistraro.

When did you start with J.C. Cannistraro, and what was your role with the company?

I began as a plumber in the field in June of 1988. In August of that same year, I became a Plumbing Foreman. I had just gotten into the union so working for a large, commercial company was very new to me at the time.

What brought you into the Plumbing Industry?

My uncle was a plumber, and he owned his own business. I used to work for him every summer when I was in high school and college, so I managed to build up time and experience in the field at a young age. When I decided to pursue plumbing as a career, I went back to school nights to educate myself in the trades.

Tell us about your current role with the company.

In the late 1990s I was asked to move into the office to become a plumbing coordinator. At that time I was strictly drawing by hand, and I eventually asked to go back into the field. A few years later, when the company invested in technology that enabled 3D Coordination, I came back to Watertown to work in coordination. Now, I love working with the models to see how I can make the plumbing systems work with the other trades. Today's technology allows coordinators to work so much more efficiently, which then makes installation much easier in the field.

What can you tell us about your family?

I am very passionate about my family. I have two boys at home; Josh who is thirteen, and David who is seventeen. David just graduated high school and will attend Fitchburg State College in the fall to study Criminal Justice. Josh just finished 7th grade and loves his video games. I have a third son, Kenny, who works as a plumber and a welder in the field for Cannistraro. I also have a grandson, named Ethan who is eight years old.

Tell us something about yourself that the average person does not know?

Many people do not know that I graduated high school early, and spent the second half of my senior year living in Israel. I was sponsored by an Israeli family and traveled the country for six months working in the community and interacting with local families. I went abroad again in college, where I spent five months traveling across Europe.

From an employee's perspective, what makes Cannistraro different from other companies?

Cannistraro is truly a family-oriented company. While I know that is a common answer, it is absolutely true. Whether you're in the field or in the office, you always feel like your work is appreciated, and management goes out of its way to thank you for a job well done.

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RECENTLY AWARDED PROJECTS

<i>Project:</i>	<i>Trades:</i>	<i>General Contractor:</i>
Boston College Merkert Lab 309A	Plumbing, HVAC, Fire Protection	Wise Construction
Boston College Jesuit Housing	Plumbing, HVAC, Fire Protection	Lee Kennedy, Co., Inc.
Logan Airport Terminal E — Baggage Handling	Plumbing, HVAC, Fire Protection	Suffolk Construction
Liberty Mutual — Boston, MA	Plumbing	Liberty Mutual
Marine Biological Laboratory Loeb Lab — Woods Hole, MA	Plumbing	Shawmut Design & Construct.
Weston Corporate Center	Plumbing	John Moriarty & Associates
Brigham & Women's Hospital Cardiac Cath Lab No. 8	HVAC	William A. Berry, & Son, Inc.
Post 390 Restaurant 406 Stuart Street, Boston, MA	HVAC	Ashling Group
Fitchburg State College Marra Village Residential	Fire Protection	Colantonio, Inc.
UMASS Access Building 7th Floor Fit-out	Fire Protection	Consigli Construction Co.

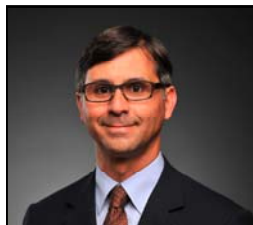
INDUSTRY RECOGNITION

The construction industry continues to turn to Cannistraro for leadership and expertise in innovative business practices such as Building Information Modeling (BIM) and Integrated Project Delivery (IPD).

“Collaborative BIM”

In May, JCC President John Cannistraro Jr. spoke on a panel for McGraw-Hill Publications discussing BIM best practices and IPD.

John discussed how alternate delivery methods and the full dimension of BIM is already revolutionizing how projects are being built.



“Creating New Ways of Working Together”

In June, to an audience of MIT students and faculty, Michael Cannistraro, P.E. explained how technology can change everything in construction. Michael explained how IPD is becoming an increasingly popular delivery method for new construction.



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2009 JOHN A. BROGAN MEMORIAL GOLF OUTING



The 2009 "Brogie" Winners: (left to right) Matt Lees, Ed Nabydoski, Dan Foley and Bob Fernberg



Mike Cray, Mark Perrone, Steve Perrone, and Will Collins



Brad Hillard readies his swing.



Bob Messia, Jim Stadnicki, Bao Lam, and Greg McKenna



Keith Wells, Steve Tramandozzi, Joe Duffy and J.P. McManus



Brad Hawes carefully follows his shot.

On June 28th, JCC's Mark Perrone and Bob Messia hosted the 6th annual "Brogie" Golf Outing. Despite overcast skies, the rain held off to allow more than fifty golfers to tee off at the George Wright Golf Club in Hyde Park.

The event began with a breakfast buffet compliments of *Charles Sheehy Co.*, followed by six strong hours of golf. Lunch was sponsored by *P.V. Sullivan, Co.*, and the skills awards were presented. "Closest to the Pin" honors were awarded to: Joe Duffy, Steve Perrone, John Walsh, and M. Sheehan. "Longest Drive" honors were awarded to: Tom Gover and Brian Adams.

The top prize of the day went to the foursome of Matt Lees, Ed Nabydoski, Dan Foley and Bob Fernberg. The foursome's score of eight-under-par earned them each Capital Grille gift cards sponsored by J.C. Cannistraro. Additional thanks to the following contributors:

Carpenter-Paterson, Newman Associates, Atlantic Construction, Harrington Brothers, Ayer Sales, RG Mearns Co., Star Sales, Independent Pipe & Supply, F.W. Webb, Co., Victaulic Corp., and Diane Collins.

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OFFICE BULLETIN BOARD

BOMA Fishing Tournament

JCC joined the Building Owners & Managers Association (BOMA) for an afternoon of fishing off the Boston coast.



JCC's Ramon Baez, Bill Fleming, and Mike Cannistraro took to the seas with Tocci's Rich Reggitano.

A Cookout with the Cannistraros

"Top Chef" beware, because the "Next Food Network Stars" mastered the grill at the annual JCC BBQ.



Mike, Joe, and John Jr. fired up the grill for the annual Cannistraro summer BBQ.

COMING SOON



Stay tuned this fall for the inaugural meeting of the *all new Boston BIM Collaborative*. J.C. Cannistraro and other innovative builders will join together to discuss how Building Information Modeling will continue to impact construction throughout Greater Boston.

To get involved in upcoming meetings, register for the Boston BIM Collaborative e-newsletter.

Email tpalange@cannistraro.com for more information.

SHOP TALK:

Editors-in-chief: Judi Resnick & Tom Palange

Writer: Tom Palange (tpalange@cannistraro.com)

Cover Photo: Mechanical room model for a new hospital in Boston, MA.

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