



# **Boston University Medical Center**

Boston, Massachusetts

**2010-2020 Institutional Master Plan**  
**Second Amendment**

**August 7, 2017**

submitted to the **Boston Planning and Development Agency**

submitted by **Trustees of Boston University**

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# Chapter 1

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## INTRODUCTION AND OVERVIEW

# CHAPTER 1: INTRODUCTION AND OVERVIEW

Boston University Medical Center (“BUMC”) is comprised of the Boston University Medical Campus (“BU Medical Campus”) and its affiliated teaching hospital, Boston Medical Center Corporation (“BMC”). The BU Medical Campus includes three of Boston University’s health science schools – the School of Medicine, the Henry M. Goldman School of Dental Medicine (“GSDM”), and the School of Public Health. On March 22, 2010, the Trustees of Boston University and BMC (collectively known as the “Proponents”) submitted a renewal for the Boston University Medical Campus Institutional Master Plan (“IMP” or “2010 IMP”) to the then Boston Redevelopment Authority (“BRA”), now Boston Planning and Development Agency (“BPDA”). The IMP detailed Boston University Medical Center’s proposed development for the next ten years, and was approved on June 22, 2010. On September 6, 2013, the Proponents submitted to the BRA the first Institutional Master Plan Amendment (the “2013 IMP Amendment”) to incorporate additions and modifications to the 2010 IMP, which was approved on November 13, 2013. An IMP Update was submitted to the BPDA on April 19, 2017.

An Institutional Master Plan Notification Form (“IMP NF”) to initiate review of a Proposed Institutional Project on the BU Medical Campus was submitted to the BPDA on May 15, 2017. A Scoping Determination was issued by the BPDA on July 5, 2017. The purpose of this Institutional Master Plan Amendment (“IMPA”) is to respond to the requirements of the Scoping Determination and to describe the proposed second amendment to the 2010 IMP to add the renovation and expansion of the Henry M. Goldman School of Dental Medicine as a Proposed Institutional Project. Further details can be found in Chapter 4.0, Proposed Institutional Project.

## 1.1 THE NEED FOR AN IMP AMENDMENT

Since the approval of the 2013 IMP Amendment, BU Medical Campus has determined that it has a unique opportunity to advance its program in dental medicine and dental services to the community through the renovation and expansion of the GSDM (the “Project”).

In 2009, the GSDM developed a strategic plan that outlined a vision to make the GSDM a premier academic dental institution promoting excellence in dental education, research, oral health care, and community service to improve the overall health of the global population. The plan identified the need for a dramatically improved facility as a critical driver of success. GSDM and University leaders have spent the ensuing eight years engaging in thoughtful planning and dialogue with alumni, faculty, and University administrators toward this end. After careful exploration of a number of potential sites to meet the future strategic needs of GSDM, an expansion of the School’s current building emerged as the best option.

GSDM maximizes the resources of its current building, which is home to more than 800 students and 400 faculty and staff, in addition to volunteers. Some 33,000 patients receive care on-site every year through 147,000 patient visits. By almost every measure, the current facility constrains what the GSDM community can undertake, and so the proposed expansion seeks to, essentially, “right size” the School’s space. All members of the GSDM community will benefit from the new facility. For students, improved facilities will maximize their learning experiences by providing innovative collaboration spaces to prepare them for their careers. For patients, the improved clinical facilities will bolster the School’s efforts to offer care and an experience commensurate with the best dental practices. For an institution that prides itself on being patient oriented, this is a critically important outcome. And finally, faculty and staff will benefit from improved spaces for teaching and administrative support, along with a layout designed to make interactions with students and patients both easier and more frequent.

The GSDM expansion and renovation Project includes a new addition of up to 50,000 square feet of Gross Floor Area (“GFA”) and renovation of up to 65,000 GFA of existing building space, with up to 35,000 GFA of the existing building space to remain untouched. The program includes clinical, office, instructional, and student collaborative spaces on seven levels. An Expanded Project Notification Form (“PNF”) was submitted to the BPDA concurrent with the IMPNF to initiate the Article 80 B Large Project Review process.

## Chapter 2

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# BOSTON UNIVERSITY MEDICAL CENTER MISSION AND OBJECTIVES

# CHAPTER 2: BOSTON UNIVERSITY MEDICAL CENTER MISSION AND OBJECTIVES

Together, BMC and the BU Medical Campus are dedicated to improving public health and serving the needs of the community. BUMC is widely recognized as a leader in the provision of outreach and quality care to vulnerable and underserved populations of the City of Boston.

## **2.1 BOSTON MEDICAL CENTER**

BMC is a private, not-for-profit, 547-bed, academic medical center located in Boston’s historic South End. The hospital is the primary teaching affiliate for Boston University School of Medicine (“BUSM”). BMC emphasizes community-based care, with its mission to provide consistently accessible health services to all. The largest safety net hospital in New England, BMC provides a full spectrum of pediatric and adult care services, from primary care and family medicine to advanced specialty care. BMC is the largest and busiest provider of trauma and emergency services in New England. The Emergency Department had 132,148 patient visits last year.

### **2.1.1 PATIENT CARE**

With more than 25,328 admissions and 1,108,461 patient visits in the last year, BMC provides a comprehensive range of inpatient and outpatient, clinical, and diagnostic services in more than 70 areas of medical specialties and subspecialties, including cardiac care, neurological care, orthopedics, geriatrics, and women’s health.

With a strong focus on patient education, its 1,486 nurses deliver compassionate patient care every day.

BMC values its diverse patient population and is committed to honoring all ethnic, religious, and cultural differences. The Interpreter Services Department at BMC is one of the most extensive in New England. In addition to providing face-to-face interpreters on-site in 14 spoken languages, American Sign Language, and Certified Deaf Interpreting, the department utilizes the latest advances in technology. These include services such as telephonic and video interpreting, which provide interpreting services 24 hours a day, 365 days a year to patients in 240 languages. In 2016, 302,991 interactions occurred.

### **2.1.2 TEACHING**

As the principal teaching affiliate of BUSM, BMC is devoted to training future generations of health care professionals. Every member of the hospital’s medical and

dental staff holds an academic appointment at the BUSM or at the Boston University Goldman School of Dental Medicine. BMC operates 62 residency training programs with 788 resident and fellowship positions.

### **2.1.3 RESEARCH**

BMC is a recognized leader in groundbreaking medical research. BMC received more than \$117 million in budgeted sponsored research funding in 2016, and oversees 568 research and service projects separate from research activities at Boston University School of Medicine. The world-renowned researchers at Boston Medical Center conduct both basic, laboratory-based biomedical research, and clinical research programs, including sickle cell, infectious disease, cardiology, vascular biology, Parkinson's disease, geriatrics, endocrinology, and hematology/oncology.

### **2.1.4 BOSTON HEALTHNET**

Focusing strongly on urban health, Boston Medical Center is a founder of Boston HealthNet, a network affiliation of the medical center, BUSM, and 14 community health centers. Established in 1995, Boston HealthNet is an integrated health care delivery system whose partners provide outreach, prevention, primary care and specialty care, and dental services at sites located throughout Boston and in nearby communities. Physicians who practice at HealthNet locations provide a wide range of comprehensive health care services to adults and pediatric patients, with a focus on disease prevention and health education. Patients receiving primary care at HealthNet sites have access to highly trained specialists and cutting-edge technology at BMC while maintaining individualized and culturally sensitive care in their neighborhoods. In 2016, Boston HealthNet health center patients accounted for 32.2 percent of outpatient visits and 37.8 percent of all inpatient admissions to BMC.

### **2.1.5 BOSTON MEDICAL CENTER HEALTH PLAN, INC.**

Boston Medical Center Health Plan ("BMCHP") is a not-for-profit health maintenance organization ("HMO") founded in 1997 by Boston Medical Center. BMCHP's Massachusetts business, BMC HealthNet Plan, serves over 220,000 members across the state through several product lines that include MassHealth (Medicaid, including CarePlus) and Qualified Health Plan. BMCHP also offers a Senior Care Options plan for individuals age 65 and older who are also eligible for Medicaid.

Because of its ongoing commitment to quality, BMC HealthNet Plan's HMO is rated 4 out of 5 – on a scale of 1 to 5, with 5 being the highest – by National Committee for Quality Assurance's ("NCQA") Medicaid Health Insurance Plan Ratings 2016-2017. This rating gives BMCHP HealthNet Plan the distinction of being one of the highest rated Medicaid health plans in the nation. BMC HealthNet Plan's Medicaid HMO also has been awarded Excellent Accreditation status by the NCQA. In addition,

BMC HealthNet Plan's Qualified Health Plan program has been awarded Accredited status from NCQA, the highest accreditation level available at this time.

In New Hampshire, BMCHP does business as Well Sense Health Plan. More than 70,000 Medicaid recipients have joined Well Sense Health Plan since New Hampshire began offering managed care coverage to Medicaid recipients in December 2013. Well Sense Health Plan's regional office is located in Manchester, New Hampshire. Well Sense Health Plan's Medicaid HMO has received Commendable Accreditation status from the NCQA based on the results from its recent submission of Healthcare Effectiveness Data and Information Systems (HEDIS®) and Consumer Assessment of Healthcare Providers and Systems (CAHPS®) data to NCQA. In addition, Well Sense Health Plan's Medicaid HMO is rated 4 out of 5 – on a scale of 1 to 5 – among Medicaid plans in the U.S., according to NCQA's Medicaid Health Insurance Plan Ratings 2016-2017. Well Sense is the highest rated Medicaid plan in New Hampshire.

Comprehensive coverage for hospital, primary, specialty, and behavioral health care are among the benefits and services provided to all members. In addition, members receive extras beyond traditional benefits, such as free car safety seats and bike helmets for kids, manual breast pumps and dental kits (including an electric toothbrush), access to a 24/7 Nurse Advice line, and reimbursements for Weight Watchers® and qualified gym memberships. Visit [bmchp.org](http://bmchp.org) or [wellsense.org](http://wellsense.org) for more information.

## **2.2 BOSTON UNIVERSITY MEDICAL CAMPUS**

BU Medical Campus has a rich history dating back to 1848, when its School of Medicine began as the New England Female Medical College: the first institution in the world to offer medical education to women and the first to graduate a black woman physician. In 1873, the medical college merged with Boston University, becoming the first coeducational medical school in the nation. In addition to the BUSM, with its Division of Graduate Medical Sciences, the BU Medical Campus is also comprised of the GSDM and the School of Public Health ("SPH"). Together, the schools train a diverse group of more than 3,000 students and employ more than 1,100 full time equivalent faculty members, many of whom are leading experts in their fields.

Renowned for the quality of their teaching and research, these three schools provide education and training in the most current techniques and approaches within their disciplines. Service to the community is a hallmark throughout the Boston University Medical Campus; with a particular focus given to serving disadvantaged, underserved and indigent populations.

### **2.2.1 BOSTON UNIVERSITY SCHOOL OF MEDICINE**

The mission of BUSM is to educate physicians who will have the knowledge, skills, and dedication needed to provide the best care to every patient from all communities in a diverse society, within an ever-changing health care environment. Other specific objectives include:

- Vision – Patients, peers, and mentors will recognize the BUSM graduate as an exemplary clinician who maintains the highest standards of medical care and professional conduct and who is fully prepared for postgraduate training;
- Clinical Arts – The graduate will: possess excellent diagnostic skills, a broad foundation of medical knowledge, and the clinical experience needed to deliver effective and efficient medical care; demonstrate excellence in communicating with and educating patients from diverse cultures, races, and ethnicities; work effectively and collaboratively within interdisciplinary teams; use information technology effectively to find and evaluate the best clinical evidence to guide patient care; be dedicated to preventing illness and improving the health of the community in which he or she practices while being responsive to the family, psychosocial, cultural, and spiritual/religious determinants of health and illness; and
- Professionalism – The graduate will: treat all patients in a caring, compassionate, and altruistic manner; adhere to the highest ethical standards of medical practice; possess the attitudes, abilities, and self-knowledge necessary for leading a life-long pattern of learning; and support improvements in access to health care for all populations with the goals of reducing racial and ethnic disparities in health status, improving the social conditions of disadvantaged populations, and contributing to the advancement of scientific knowledge.

BUSM promotes these qualities via the establishment of a supportive, respectful, and nurturing educational environment, and maintenance of the highest standards of student performance; a commitment to achieving and supporting a diverse student body; the engagement of students in curricular evaluation; maintenance of a curriculum inclusive of evidence-based educational methods; and through leadership in developing, applying, and evaluating innovative methods of medical education.

To achieve a dynamic curriculum responsive to rapid social and biomedical changes, and to ensure that student and curricular goals are met and the highest educational standards of excellence are maintained, BUSM continuously evaluates its learners, faculty, programs, and its mission and goals.

## **2.2.2 SCHOOL OF PUBLIC HEALTH**

The mission of the School of Public Health is to improve the health of local, national and international populations, particularly the disadvantaged, underserved and vulnerable, through excellence and innovation in education, research and service. In keeping with the SPH's service-oriented philosophy, each department combines research and academics with a practicum requirement, resulting in a rigorous, well-rounded curriculum enhanced by work experience in the public health environment. Strategic themes of the SPH include:

- Involved: Emphasize real-world involvement and meaningful partnerships;
- Interconnected: Emphasize interdisciplinary efforts and integrated programs; and
- Global: Emphasize global health issues and perspectives.

Through longstanding collaborations with such institutions as the Massachusetts Department of Public Health, the Boston Public Health Commission, and the Veterans Affairs Administration; and international alliances with the Red Cross, the Peace Corps, and foreign governments; the students, faculty, and alumni draw on their own diverse backgrounds to carry out the SPH's mission in a variety of settings.

## **2.2.3 HENRY M. GOLDMAN SCHOOL OF DENTAL MEDICINE**

The Boston University Henry M. Goldman School of Dental Medicine is a premier academic dental institution promoting excellence in dental education, research, oral health care, and community service whose mission is to improve the overall health of the global population by:

- Providing outstanding service to a diverse group of students, patients, faculty, staff, alumni, and healthcare professionals within its facilities, the community, and the world;
- Shaping the future of the profession through scholarship, creating and disseminating new knowledge, developing and using innovative technologies and educational methodologies, and by promoting critical thinking and lifelong learning; and
- Supporting this mission using responsible financial policies and philanthropy.

The GSDM will do so in an ethical, supportive environment, consistent with its core values of respect, truth, responsibility, fairness, compassion; and its operational values of excellence, service and effective communication in synergy with the strategic plan of Boston University.

## **GSDM Renovation and Expansion Mission and Objectives**

GSDM maximizes the resources of its current building, which is home to more than 800 students and 400 faculty and staff, in addition to volunteers. Some 33,000 patients receive care on-site every year through 147,000 patient visits. By almost every measure, the current facility imposes constraints on the GSDM educational programs and clinical actions. The proposed expansion and renovations will provide better quality spaces for the School's educational and clinical needs. All members of the GSDM community will benefit from the new facility. For students, a better space will improve the learning experience by providing innovative collaboration spaces to prepare them for their careers. For patients, the new space will bolster the School's efforts to offer care and an experience on par with the best dental practices. For an institution that prides itself on patient-oriented care, this is a critically important outcome. Finally, faculty and staff will benefit from improved spaces for teaching and administrative support, along with a layout designed to make interactions with students and patients both easier and more frequent.

## **2.3 SUSTAINABILITY**

### **2.3.1 BMC SUSTAINABILITY INITIATIVES**

BMC is completing a clinical campus redesign that is expected to reduce greenhouse gas emissions by 50 percent by 2020.

BMC has partnered with Eversource on more than 30 energy efficiency projects in the past four years, achieving more than eight million kilowatt hours in annual energy savings. The hospital also partnered with Veolia on a 20-year thermal energy agreement to use recycled 'green steam' as a byproduct of electricity generation to provide heat to the hospital campus.

In October, 2016, BMC announced a solar energy purchase with Massachusetts Institute of Technology and the Post Office Square Redevelopment Corporation that enabled the construction of a 650-acre, 60-megawatt solar facility in North Carolina. This is the largest renewable energy project ever built in the U.S. by an alliance of diverse buyers. BMC's solar purchase is the equivalent of 100 percent of BMC's expected electricity consumption, putting the hospital on pace to be carbon neutral when the campus redesign is completed in 2018.

In spring 2017, the hospital began generating much of its electricity and heat through a natural gas-fired, 2 megawatt combined heat and power plant on the roof of its Yawkey Ambulatory Care Center. The cogeneration plant, the size of a tractor trailer, will save \$1.5 million a year in energy efficiency, money that can be put back into patient care. The cogeneration plant also has 'black start' capability, making the BMC the only academic medical center in Massachusetts that can be powered on an island

for months at a time if the electric grid goes down, as long as the hospital has a supply of natural gas.

The hospital's green efforts also extend to areas of patient care: all of BMC's Operating Rooms now recycle blue wrap, with more than 12,000 pounds recycled since the program was launched in May 2015.

BMC has joined the Northwest Atlantic Marine Alliance and Health Care Without Harm's Healthy Food in Healthcare Program to buy local seafood whenever possible, benefitting both local fishing communities and the marine ecosystem.

Since BMC rolled out a biodigester in December 2015, the hospital has diverted more than 110 tons of food waste, rather than throwing it in the trash.

This summer, BMC launched the first hospital-based rooftop farm in Massachusetts, which will provide 15,000 pounds of fresh, healthy food to hospital patients and visitors this growing season. The food will be served to patients, and also through cafeterias and the hospital's food pantry.

At the completion of BMC's Clinical Campus Redesign project in 2018, BMC will consolidate its two clinical inpatient facilities into a single campus resulting in the reduction of an additional 11 million kilowatt hours of electricity consumption.

BMC, a member of the Green Ribbon Commission's ("GRC") Health Care Working Group, has been recognized nationally for its efficiency and sustainability efforts. Becker's Hospital Review named BMC one of the 50 greenest hospitals in America, and BMC received three prestigious awards from Practice Greenhealth in 2017: the Top 25 Environmental Excellence Award, the higher honor Practice Greenhealth bestows on hospitals, as well as the Greening the OR Recognition Award and the Circle of Excellence award in the energy category.

### **2.3.2 BU MEDICAL CAMPUS SUSTAINABILITY INITIATIVES**

The mission of sustainability@BU is to lead the University in a more sustainable direction and integrate sustainability into the culture and structure of Boston University. Through this effort, the University will reduce its use of natural resources, operating costs, and improve environmental and social impacts. Engagement efforts include a long-standing monthly communications campaign, a robust student internship program, staff & faculty Sustainability Liaisons, student organizations, Green Office Certification, Move In and Move Out waste diversion programs, the Sustainability Festival, Earth Week+, and the sustainability@BU mobile app.

Operational efforts are primarily focused on seven key areas: Energy Conservation, Climate Action Planning, Green Building Design, Recycling and Waste Reduction, Communications and Outreach, Food, and Transportation.

Specifically at BU Medical Campus, sustainability@BU implements all of the above programming as well as a polystyrene recycling pilot program to address the volume of foam coolers generated by the labs. Even before sustainability@BU existed, the Medical Campus had coalesced a Sustainability Committee that was tasked with identifying, communicating, and promoting best practices with regard to energy reduction measures, waste management, and sustainability at BUMC. The committee's work is now part of sustainability@BU, whereby many of the most dedicated employees from the committee now serve as Sustainability Liaisons.

Liaisons represent every school and college. They meet quarterly with sustainability@BU to improve communication on campus sustainability issues, discuss potential projects within individual schools, and share challenges, solutions, and successes. They also facilitate the main outreach and education effort with faculty and staff, the Green Office Certification program. Through a partnership between sustainability@BU, Sustainability Liaisons, and Facilities Management and Planning, the Trash Buddy waste reduction program has been implemented in all offices on the Charles River Campus and is underway at the Medical Campus.

In 2008, BU established the Sustainability Revolving Loan Fund—a fund powered by the reinvestment of energy project savings. Last year, BU met its 2020 25% greenhouse gas reduction goal ahead of schedule. This was in large part due to energy efficiency projects centrally funded and those financed by the Sustainability Revolving Loan Fund. sustainability@BU was born in 2009 with the hiring of the University's first full time Sustainability Director, who participates in many external sustainability organizations, such as the Urban Land Institute and the Boston Green Ribbon Commission.

BU is a member of the GRC, whose mission is to convene leaders from Boston's key sectors — business, education, health care, finance, real estate, professional services, and others — to support the outcomes of the City's Climate Action Plan. Over the years, Boston University has participated in and hosted many Boston and GRC events to share best practices across the higher education and healthcare sectors.

In 2017, BU joined Mayor Walsh and over 1,200 mayors, college and university leaders, governors, businesses, and investors to continue to support the climate action strategies espoused in the Paris Agreement.

At present, BU's Climate Action Plan Task Force is charged with developing a five-point plan to mitigate its impact on climate change while it prepares its campuses for unavoidable changes, thus building upon the University's 2014 vulnerability

assessment, entitled Climate Ready BU. Supporting energy efficient laboratories on the Medical Campus will also be a key component to the development of the BU Climate Action Plan.

### **2.3.3 GSDM RENOVATION AND EXPANSION SUSTAINABILITY GOALS**

The Project will incorporate sustainable design strategies and will target a minimum of Leadership in Energy and Environmental Design (“LEED”) Silver certification. The LEED rating system will be used as a framework to measure the various sustainable features of the Project. This system is divided into the following categories: Integrative Process, Location and Transportation, Sustainable Sites, Water Efficiency, Energy and Atmosphere, Materials and Resources, Indoor Environmental Quality, Innovation and Regional Priority Credits.

The Project has been registered under LEED NC V3, but will comply with the requirements of the City of Boston to address the current LEED Version 4 (“V4”). The Proponent has used a LEED V4 for BD+C: New Construction and Major Renovation Checklist to illustrate that the Project is currently tracking 55 LEED points.

The Project will comply with Article 37 of the Boston Zoning Code, Boston’s Green Building Regulations. The purpose of Article 37 is to ensure that major building projects are planned, designed, constructed, and managed to minimize adverse environmental impacts; to conserve natural resources; to prepare for climate change; to promote a more sustainable city; and to enhance the quality of life in Boston. The narrative below demonstrates that the Project is in compliance with Article 37.

#### **Sustainable Practices**

While certain challenges exist when renovating and expanding an aging building, a number of measures have been incorporated to address sea level rise and climate change.

Generator and emergency power distribution equipment has been moved to the roof penthouse. The location of the server room containing head end telecommunications equipment, which is presently located in the basement, has been moved to fourth floor.

#### **Clean and Renewable Energy Practices**

The Proponent and Project Team are evaluating the feasibility of utilizing the roof area on the Project for photovoltaic panels. Due to the fact that the majority of the roof is comprised of the existing structure, and the remainder will be utilized for mechanical equipment, there are minimal practicable opportunities to add a system of this type to the roof of the building.

**Energy Efficiency Assistance**

Boston University has Memoranda of Understandings with National Grid and Eversource to reduce natural gas and electricity consumption over three years. Incentives from Eversource for upgrading the entire facility lighting system to LED technology are also being explored. Providing automatic lighting controls is also appropriate for this Project. There may also be utility incentives for providing automatic lighting controls.

**2.4 SAFETY ON CAMPUS**

Boston University Medical Center's Department of Public Safety provides services and support to the Boston University Schools of Medicine, Dental Medicine and Public Health and to Boston Medical Center. The mission of the department is to provide a safe and secure environment for employees, patients, staff, students and visitors while minimizing the opportunity for loss of personal and institutional assets. The BUMC Public Safety Department is staffed 24 hours a day, 7 days a week, with 125 members of the department involved in a continuous training program that addresses all relevant aspects of policing and all aspects of medical center operations.

## Chapter 3

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# EXISTING PROPERTY AND USES

## CHAPTER 3: EXISTING PROPERTY AND USES

### 3.1 CLARIFICATION OF OWNERSHIP, LEASED SPACE, AND USE

#### 3.1.1 BOSTON MEDICAL CENTER

Changes and clarifications to land or buildings owned or leased by BMC are listed below and shown in Table 3-1. See Figure 3-1, BUMC Master Plan Map.

- BMC sold the Doctor's Office Building (DOB) and currently leases 91,783 sf for Administration/Outpatient use.
- BMC sold the Gambro Building and currently leases 17,288 sf for Administration/Outpatient use.
- BMC sold the Perkin Elmer site located at 100 East Canton Street, 123 East Dedham Street, and 575 Albany Street. The Perkin Elmer site is currently vacant.
- BMC has entered into an agreement to sell Newton Pavilion and the Health Services Building. BMC anticipates vacating these buildings in October 2018 and consolidating its functions on its West Campus.
- BMC currently leases 12,197 sf in Crosstown Center for Administration use and recently added 7,000 sf of leased space for Outpatient use (in addition to the existing approximately 33,736 sf sub-leased from BU).
- BMC no longer leases space at 560 Harrison Avenue.
- Yawkey Ambulatory Care Center was designated as outpatient care, but is also used for inpatient care.
- The existing Power Plant was classified as mechanical, but is also used for loading and materials management.
- BMC relocated a portion of its Administration functions to the Schrafft Center in Charlestown, MA where BMC currently leases 171,800 sf for administrative use.

#### 3.1.2 BOSTON UNIVERSITY

Changes and clarifications to land or buildings owned or leased by BU are listed below and shown in Table 3-1.

- 580 Harrison Avenue is no longer leased by BU.

- 801 Albany Street is no longer leased by BU.
- 761 Harrison Avenue is no longer leased by BU.
- 815 Albany Street, formerly a vacant lot, has had a change of use and is now a medical student residence.

### 3.1.3 BUILDING AND LAND OWNERSHIP/LEASE STATUS

**Table 3-1: BUMC Building and Land Ownership/Lease Status**

Facility	Former Principal Uses	SF	Stories	Former Own/ Lease	Current Status
<b>Boston Medical Center</b>					
Doctors Office Building	Administration/ Outpatient	91,783	B + 12	Own	No longer owned by BMC, now leased
Gambro 660 Harrison Ave	Administration/ Outpatient	17,288	3	Own	No longer owned by BMC, now leased
Perkin Elmer 100 E. Canton St	Administration	64,203	B 1 <sup>st</sup> and 3rd	Own	No longer owned by BMC, currently vacant
Perkin Elmer North – 575 Albany St	Administration	12,000	n/a	Own	No longer owned by BMC, currently vacant
Perkin Elmer South – 575 Albany St	Administration	44,000	n/a	Own	No longer owned by BMC, currently vacant
Perkin Elmer 123 E. Canton St	Administration	9,258	n/a	Own	No longer owned by BMC, currently vacant
Newton Pavilion	Inpatient/ Administration/ Research/Instruction	257,019	B + 8	Own	BMC has entered into an agreement to sell and will vacate in 10/2018 and consolidate uses to West Campus
Crosstown Center 801 Massachusetts Ave	Administration/ Outpatient	52,933	n/a	Lease	BMC has added 7,000 sf for Outpatient use (added to 12,197 sf of Admin.)
560 Harrison Ave	Administration	19,000	n/a	Lease	BMC no longer leases space at 560 Harrison Ave
Yawkey Ambulatory Care	Outpatient	218,477	B + 5	Own	Also used for Inpatient
Power Plant	Mechanical	64,064	B + 4	Own	Also used for Loading and Materials Management
Health Services	Inpatient Support/Outpatient	73,651	B + 6	Own	BMC has entered into an agreement to sell and will vacate in

Facility	Former Principal Uses	SF	Stories	Former Own/ Lease	Current Status
					10/2018 and consolidate uses to West Campus
BCD	Administration	28,174	B + 5	Own	No change
Betatron	Administration	5,912	n/a	Own	No change
Dowling	Administration/ Outpatient	137,890	B + 9	Own	Demolition of 20,000 SF
Preston	Outpatient	65,967	5	Own	No change
FGH	Outpatient	29,435	B + 5	Own	No change
Shapiro Ambulatory Care Center	Outpatient	245,000	B + 9	Own	No change
Menino Pavilion	Inpatient	337,340	B + 8	Own	No change
85 East Concord St	Administration	66,952	B + 8	Own	No change
125 East Concord St, Solomon Carter Fuller Mental Health	Administration	11,000	B + 9	Lease	No change
Vose Hall	Administration	22,695	5	Own	No change
Old Evans	Administration	60,070	9	Own	No change
Collamore	Administration	43,470	7	Own	No change
Helipad	Helipad	-	n/a	Own	No change
Moakley Building	Outpatient	133,217	B + 3	Own	No change
615 Albany St, Naval Blood ("N") Building (jointly owned by BU & BMC 50/50)	Administration/ Research/Instruction	19,710	B + 5	Own	No change
<b>Boston University Medical Campus</b>					
580 Harrison Ave	Administration/ Research/Instruction	18,952	n/a	Lease	No longer leased by BU
801 Albany St	Administration/ Research/Instruction	41,198	n/a	Lease	No longer leased by BU
761 Harrison Ave	Administration/ Research/Instruction	122,922	n/a	Lease	No longer leased by BU
815 Albany St	Administration/ Research/Instruction /Residential/Retail	102,283	B + 9	Own	Now a medical student residence

Facility	Former Principal Uses	SF	Stories	Former Own/ Lease	Current Status
Albany Fellows, Parcel 1	Administration/ Research/Instruction Residential/Retail	-	n/a	Own	No change
Albany Fellows, Parcel 2B	Administration/ Research/Instruction Residential/Retail	-	n/a	Own	No change
609 Albany St, Dermatology ("J") Building	Administration/ Research/Instruction	34,692	B + 6	Own	No change
615 Albany St, Naval Blood ("N") Building (jointly owned by BU & BMC 50/50)	Administration/ Research/Instruction	19,710	B + 5	Own	No change
70 E. Concord St, Medical School Instructional ("L")	Administration/ Research/Instruction	215,002	B + 14	Own	No change
80 East Concord St, Medical School ("A") Building	Administration/ Research/Instruction	25,931	B + 5	Own	No change
82 East Concord St, Talbot ("T") Building	Administration/ Research/Instruction	87,080	B + 4	Own	No change
125 East Concord St, Solomon Carter Fuller Mental Health	Administration/ Research/Instruction	43,589	B + 9	Lease	No change
75 East Newton St, Evans ("E") Building	Administration/ Research/Instruction	180,099	B + 9	Own	No change
100 East Newton St, Goldman Dental School ("G") Building	Administration/ Research/Instruction	89,406	B + 7	Own	No change
560 Harrison Ave	Administration/ Research/Instruction	14,786	n/a	Lease	No change
680 Harrison Ave, Robinson ("B") Building	Administration/ Research/Instruction	56,487	B + 6	Own	No change
778 Harrison Ave, Housman ("R") Building	Administration/ Research/Instruction	119,987	B + 10	Own	No change
790 Harrison Ave, Conte ("K") Building	Administration/ Research/Instruction	77,886	B + 7	Own	No change
801 Mass Ave, Crosstown Center	Administration/ Research/Instruction	101,114	n/a	Lease	No change

\* B = basement

## 3.2 CAMPUS IMPROVEMENT PROJECTS

### 3.2.1 BOSTON MEDICAL CENTER

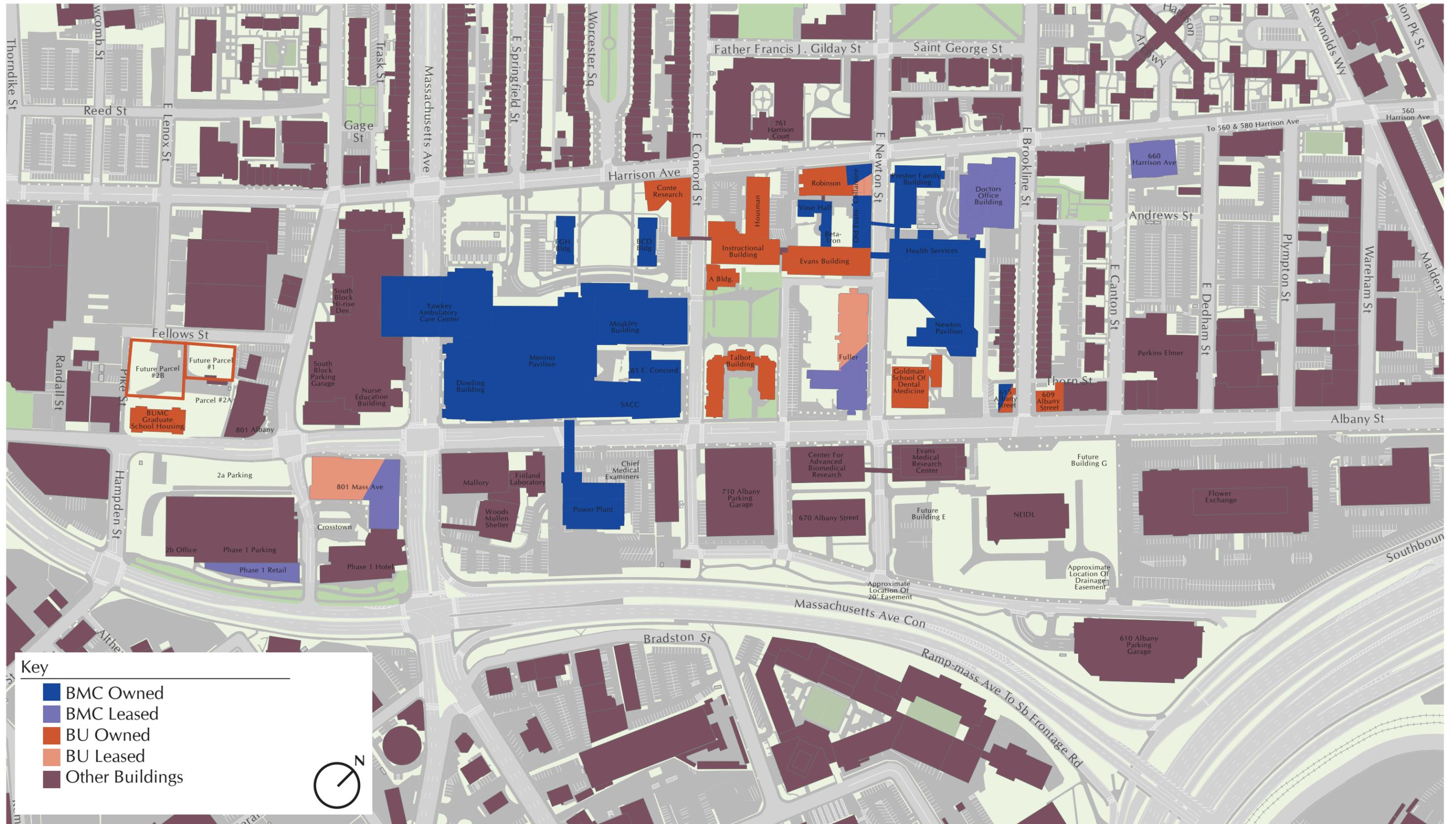
Proposed campus improvements were identified as part of the approved 2013 IMP Amendment. In association with the Moakley Cancer Care Center Addition, the New Inpatient Building Phase 1, and the New Patient Transport Bridge, BMC has undertaken the following improvements:

- Installed new ADA compliant sidewalks and curb cuts, landscape improvements, and street lighting along East Concord Street and new MBTA bus stop seating area under a canopy that was integrated into the Moakley Cancer Care Center addition building design.
- As part of the New Inpatient Building Phase I project along Albany Street, new ADA compliant sidewalks and curb cuts, landscaping, street lighting, and way finding signage on both the building and sidewalks in front of the new addition and the Dowling Building were installed. Asphalt top coat and traffic line striping will be installed on Albany Street between Massachusetts Avenue and East Concord Street.
- As part of the New Patient Transport Bridge, the “yellow tube” formerly crossing Albany Street was removed and replaced with a glass bridge, which significantly improves and transforms the Albany Street image.
- An interim loading dock and materials handling area was completed in the front of the existing Power Plant. Loading activities have been relocated to the south side of Albany Street and all movement transferred from Albany Street to the parking lot in front of the existing Power Plant. This relocation will also alleviate the conflicting vehicular and pedestrian circulation caused by the previous configuration, which will be fully realized when landscaping and remaining exterior work for Phase 1 of the New Inpatient Building is complete.

BMC continues to pursue various campus and building maintenance activities to better serve the community. These include: replacing aging infrastructure throughout the campus, upgrading and replacing finishes in all facilities, ongoing general operational improvements, maintaining its many campus open spaces, and improvements to the Albany Street sidewalk to enhance the pedestrian experience along the street and to assist patients and visitors in wayfinding.

### 3.2.2 BOSTON UNIVERSITY

No new BU campus improvement projects have been initiated since the 2013 IMP Amendment.



## Chapter 4

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# PROPOSED INSTITUTIONAL PROJECT

# CHAPTER 4: PROPOSED INSTITUTIONAL PROJECT

BUMC seeks an amendment to the IMP in order to expand and renovate the GSDM in its current location at 100 East Newton Street. The expansion of the GSDM was not anticipated or included in the 2010-2020 IMP, and therefore will require a text amendment under Article 80D of the Boston Zoning Code. Boston University has determined that it has a unique opportunity to advance its program in dental medicine and dental services to the community through the renovation and expansion of the GSDM. Construction of the Project will be conducted over the course of up to 39 months. The phasing of the Project will be planned to optimize use of the building as classroom and patient treatment space during the course of construction. For this reason, the Project will be constructed in three phases, commencing on or about January 1, 2018.

At this time, no other changes to the IMP are proposed.

## 4.1 DESCRIPTION OF THE PROPOSED IMP PROJECT

### 4.1.1 PROJECT PROGRAM ELEMENTS

Boston University is in the design stages of an expansion plan for the GSDM, which will expand the existing GSDM building at the corner of Albany Street and East Newton Street. The Project includes a new addition of up to 50,000 square feet of GFA and up to 65,000 GFA of renovated existing institutional building space, with up to 35,000 GFA of the existing building space to remain untouched. The program includes clinical, office, instructional, and student collaborative spaces on seven levels. No new off-street parking spaces or parking facilities are proposed for the Project.

Critical program design goals for the Project have been identified as:

- Improve clinical space for patient care retention and experience, as well as student learning.
- Enhance instructional space by creating multi-functional spaces that provide opportunities for new pedagogies and technologies.
- Relocate the Simulation Learning Center (“SLC”) from the 650 Albany Street facility to be contiguous with instructional space at the Project.
- Create student collaboration and gathering space demonstrating the importance of informal and peer-to-peer learning.

- Transform the building exterior with a new façade, while also creating dedicated patient and student/faculty/staff entrances.

The Project Site is located at 100 East Newton Street at the intersection of East Newton and Albany Streets. The Project Site is surrounded by BMC's Newton Pavilion property. Uses within the vicinity of the Project Site include: clinical, research, support, administration and academic. The Project is in the South End neighborhood.

The existing building footprint is approximately 13,000 sf. The existing building consists of a cafeteria, which is one level above grade, and the academic/clinical building, which is seven levels above existing grade, plus a rooftop penthouse. A full basement contains mechanical/electrical and support spaces. Level 1 (the entry level) is 4'-0" above grade. Floor to floor heights are 12'-0", resulting in a roof elevation at approximately 104'-0". The existing building also includes a concrete panel wall which extends to become a 7' high parapet.

The proposed addition, which requires the removal of the one-story cafeteria, extends seven levels along the northwest edge of the existing building and two levels along the northeast edge. The two-level portion will have a basement addition. An electrical room and rooftop screen will obscure mechanical equipment, which will be mounted on the roof of the seven level addition. The new building footprint area will be approximately 18,000 SF. See Figure 4-1, Project Site Plan.

**Table 4-1: Proposed Institutional Project**

Location:	100 East Newton Street, Boston, MA
Site Area:	25,490 square feet
Existing Use:	University use including: classrooms, laboratories, office, collaboration, clinics, waiting and lobby, support/storage space
Proposed Use:	University use including: classrooms, laboratories, office, collaboration, clinics, waiting and lobby, support/storage space
Proposed Maximum Height:	Seven stories (110')
Proposed Maximum Gross Floor Area:	Up to 150,000 square feet GFA <sup>1</sup>
Proposed Maximum FAR:	5.9
Current Zoning:	Institutional Subdistrict

<sup>1</sup> GFA is defined in section 2A of the Boston Zoning Code.

#### **4.1.2 TOTAL PROJECT COST ESTIMATES**

The total Project cost to construct is estimated to be \$86,300,000.

#### **4.1.3 ESTIMATED DEVELOPMENT IMPACT PAYMENTS**

Estimated Development Impact Payments (“DIP”) for the renovation and expansion of the GSDM are based on the current program of 53,100 square feet GFA of renovated space and 41,900 square feet GFA of new construction. DIP amounts will be subject to certification pursuant to Article 80B7 based on actual GFA. DIP calculations are estimated as follows:

Jobs Trust Payment	\$158,650.00
Housing Trust Payment	<u>\$792,300.00</u>
Total Anticipated Payment	\$950,950.00

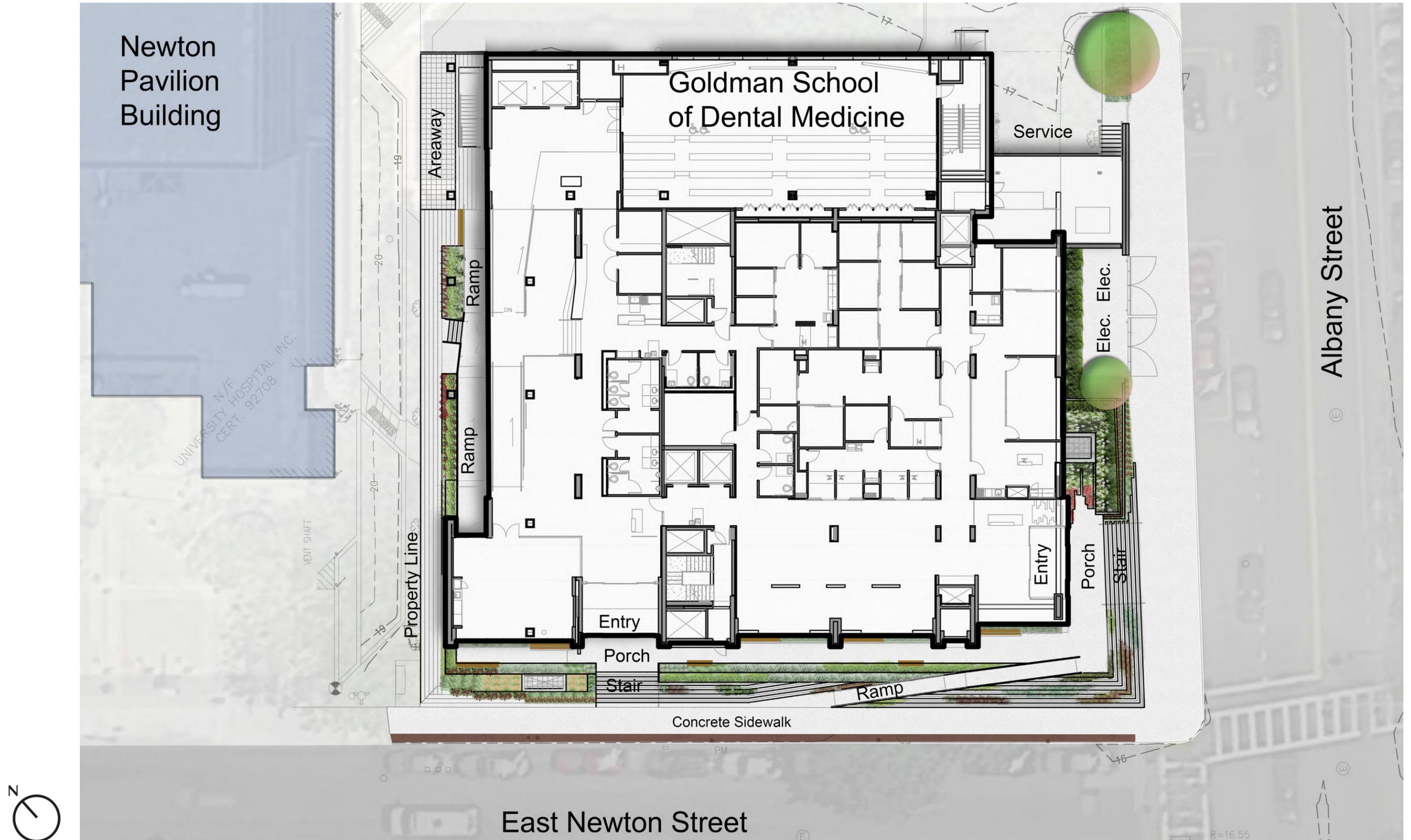
#### **4.1.4 CONSTRUCTION DURATION**

Construction of the Project will be conducted in three phases over the course of up to 39 months. The phasing of the Project will be planned to optimize use of the building as classroom and patient treatment space during the course of construction. For this reason, the Project will be constructed in three phases, commencing on or about January 1, 2018.

Phase 1: Beginning with site setup and demolition, Phase 1 will include utility relocation, exterior wall removal, excavation and foundation construction as well as most of the new construction. Phase 1 is expected to be completed in March 2020.

Phase 2: This phase will overlap with and commence approximately three months prior to the completion of Phase 1, beginning in January 2020 and ending in August 2020. Phase 2 will consist of cladding the exterior of the existing building as well as replacement of the existing roof.

Phase 3: This phase will commence at the completion of Phase 1 and will overlap with Phase 2. Phase 3 will include interior fit out of levels 5 and 6 and core renovations of all levels (Basement through level 7).



## Chapter 5

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# TRANSPORTATION

# CHAPTER 5: TRANSPORTATION

## 5.1 PARKING AND LOADING

The BUMC is located in the South End neighborhood of Boston. Regional vehicular access to the BUMC Campus via the north and south is provided directly via the Massachusetts Avenue Connector. At Massachusetts Avenue, the Connector joins Melnea Cass Boulevard, which provides a direct connection to the Longwood Medical and Academic Area. Local vehicular access is primarily from Harrison Avenue, Massachusetts Avenue, and Albany Street. East Concord Street and East Newton Street provide connections from the primary campus parking facilities (the 710 Albany Street and 610 Albany Street garages) to other facilities within the campus.

Although the existing building will increase in size by approximately 41,900 GFA (or up to 50,000 GFA), there is not expected to be a significant increase in the student or faculty population. The treatment chair count is expected to increase in number from approximately 169 to 175. Because there will not be a significant increase in the head count at the GSDM, especially during the commuting peak periods, the transportation impacts related to the Project are negligible.

### 5.1.1 PARKING

An inventory of the existing off-street and on-street parking in the vicinity of the Project was taken. The off-street parking and on-street parking is summarized in the sections below. Parking in the area is not expected to be impacted by the Project.

#### **Off-street Parking**

BUMC is served by approximately 3,420 spaces. Of those spaces, approximately 2,665 are provided in on-site garages, with the remaining spaces located at surface lots.

#### **On-street Parking**

Parking in the quarter-mile surrounding the Project Site consists primarily of metered parking and resident permit only. Several areas around the Project Site are restricted to MBTA bus stops and loading zones.

### 5.1.2 LOADING AND ACCESS TO THE BUILDING

Some minor transportation modifications will be necessary to accommodate the Project. The main pedestrian entrance to the building will be relocated from East Newton Street to Albany Street. A bus shelter and miscellaneous signal equipment

serving the intersection of Albany Street and East Newton Street will be relocated. Patients and students will have two separate entrances to the building at the ground floor, with improved accessibility from the street level. The GSDM will continue to utilize a loading dock in the existing location off of Albany Street, accessed from Albany Street between East Newton Street and East Brookline Street. Loading activities and movements are not expected to change.

### **5.1.3 GSDM MOVE IN/MOVE OUT**

As an academic institution and clinical treatment facility, the GSDM will not generate “move in/move out” impacts that are common to student residences. Once the construction activities are completed and interior furnishings are installed and other equipment is delivered, the GSDM building will continue to operate as it does today, with no new neighborhood impacts.

## Chapter 6

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# PUBLIC BENEFITS

## CHAPTER 6: PUBLIC BENEFITS

### 6.1 COMMUNITY BENEFITS – BMC

BMC provides numerous public benefits to the City of Boston. The IMP Projects will directly enhance the institution's ability to administer the services that support their mission within the community.

#### 6.1.1 INTRODUCTION

Unwavering in its commitment to address the health needs of its community, BMC provides a wide range of programs beyond the traditional medical model. Core to fulfilling the public health mission and consistent with the Community Health Needs Assessment findings, the goals of the community benefits program are to improve access to health services and improve health outcomes for underserved populations in the BMC community.

#### 6.1.2 COMMUNITY INFORMATION

The statute that created BMC requires it to serve all populations. BMC is a private, not-for-profit, 487-licensed bed, urban academic medical center which emphasizes community-based, accessible care and the mission to provide consistently accessible health services to all in need of care regardless of status and ability to pay. BMC is the largest safety net hospital in New England and provides a full spectrum of pediatric and adult care services from primary to family medicine to advanced specialty care.

Approximately 72% of patient visits come from underserved populations, such as the low-income and elderly, who rely on government payers such as Medicaid, the Health Safety Net, and Medicare for their coverage; 32% do not speak English as a primary language. To address the health needs of its diverse patient population, BMC provides a wide range of services beyond the traditional medical model. These programs include, but are not limited to, patient navigation and a food pantry to help reduce barriers to accessing health services and eliminate disparities in health care among the various populations BMC serves.

With more than 25,326 admissions and 1,108,461 patient visits in 2016, BMC provides a comprehensive range of inpatient, clinical and diagnostic services in more than 70 areas of medical specialties and subspecialties. As the largest 24-hour Level I trauma center in New England, BMC's Emergency Department had 132,148 visits in FY16.

BMC serves the urban community of Greater Boston. The majority of the communities that BMC serves are Boston census tracts that are federally-designated medically underserved areas/populations. Although Massachusetts' universal care enables individuals to seek care at any hospital, BMC remains the largest safety net provider in Boston and New England. The implementation of universal care did not reduce the real number or percent of underserved communities served by BMC. In 2012, an estimated 21.6% of Boston residents had incomes below the federal poverty level.

### **6.1.3 NEEDS ASSESSMENT**

In 2016 BMC conducted a comprehensive Community Health Needs Assessment (CHNA), which included reviewing existing social, economic, and health data among residents of Boston and those who are traditionally underserved; conducting focus groups with community members; and conducting key informant interviews with health care providers and community stakeholders. BMC's CHNA identified the health-related needs of and assets in the community served by BMC through a Social Determinants of Health Framework, which defines health broadly and recognizes numerous factors at multiple levels— from lifestyle behaviors (e.g., healthy eating and active living) to clinical care (e.g., access to medical services) to social and economic factors (e.g., poverty) to the physical environment (e.g., air quality)—which have an impact on the community's health.

Over 62 individuals, persons with expertise in public health; leaders, representatives and members of medically underserved, low-income, minority populations; and populations with chronic disease needs from the community served by the hospital were engaged in focus groups and interviews to gauge their perceptions of the community, priority health concerns, and what programming, services, or initiatives are most needed to address these concerns. In total, four focus groups and nine key informant discussions were conducted in October 2015 through February 2016. Focus groups were held with 54 community residents representing the following population segments: Spanish language speaking adults in East Boston; Cape Verdean Creole language speaking adults in Dorchester; and English language speaking adults in the South End and Roxbury. Nine key informant discussions were conducted with individuals representing the local, regional, and statewide level. Key informants represented a number of sectors including non-profit/community service, city government, hospital or health care, education, housing, substance abuse, and emergency preparedness. Focus group and interview discussions explored participants' perceptions of their communities, priority health concerns, perceptions of public health, prevention, and health care services, and suggestions for future programming and services to address these issues.

Existing social, economic, and health data were drawn from national, state, county, and local sources, such as the National Cancer Institute, the U.S. Census, U.S. Bureau

of Labor Statistics, Massachusetts Department of Public Health, Boston Public Health Commission, and the Boston Police Department. Over 62 individuals, representing healthcare providers, community stakeholders, and residents were engaged in focus groups and interviews to gauge their perceptions of the community, priority health concerns, and what programming, services, or initiatives are most needed to address these concerns. Two focus groups were conducted in languages other than English, including Spanish and Cape Verdean Creole.

Key findings that emerged from the CHNA included health care access, chronic diseases and risk factors, mental health and substance abuse, and violence.

Unwavering in its commitment to address the health needs of its community, BMC provides a wide range of programs beyond the traditional medical model. Core to fulfilling its public health mission and consistent with the CHNA findings, the goals of the community benefits program are to improve access to health services and improve health outcomes for underserved populations in the BMC community.

#### **6.1.4 PROMOTION OF COMMUNITY HEALTH**

##### **6.1.4.1 ACCESS TO AND UTILIZATION OF HEALTH CARE**

**Birth Sisters and Centering Pregnancy:** BMC has developed two programs, Birth Sisters and Centering Pregnancy, to improve health outcomes of childbearing women at risk for poor maternal and infant outcomes. Birth Sisters are women who are trained to provide social support and education to mothers from their own communities during pregnancy, labor, and the postpartum period. The Birth Sisters program has been linked to significantly higher breastfeeding rates and fewer cesarean deliveries. Centering Pregnancy is an innovative and proven model of care that offers prenatal care in 10 two-hour group sessions using a curriculum modified to meet the complex social needs of BMC's population. At these sessions, beginning early in the second trimester, patients receive health visits, prenatal and parenting education, and peer group support all in one visit. The programs served a combined 1,154 patients in FY16.

**Boston Center for Refugee Health and Human Rights (BCRHHR):** The mission of the BCRHHR is to provide comprehensive health care for refugees and survivors of torture and related trauma, coordinated with legal aid and social services; to educate and train agencies and professionals who serve these communities; to advocate for the promotion of health and human rights in the United States and worldwide; and to conduct clinical, epidemiological, and legal research for the better understanding and promotion of health and quality of life for survivors of

torture and related trauma. In Fiscal Year 2016, the BCRHHR served 374 patients.

**Cancer Screenings:** BMC offers annual free cancer screening events to vulnerable, underserved individuals in order to promote the early detection of cancer. Because BMC serves a predominantly minority and low-income population, including many non-English-speaking citizens and immigrants, the delivery of exceptional care requires a keen sensitivity to the challenges for the patient population. The weekend cancer screenings effectively reach the target population because they create a convenient time for people who work to access screenings.

**Child Life Program (CLP):** The CLP helps children and families manage the stresses associated with hospitalization and illness. The Child Life Team is trained to help children and families understand the hospital experience and related feelings. The goals of the CLP are to: help children express their feelings in a safe and supportive environment; help children manage pain effectively; offer children choices that increase feelings of independence, self-esteem and trust; and assist with implementation of coping techniques during stressful situations. The Child Life Team sees approximately 6,000 individuals per year in the Pediatric ED, and 20,000 children per year in the primary care clinic.

**Child Mental Health Initiative:** The Child Mental Health Initiative (CMHI) is a partnership between Boston Medical Center and three community health centers that combines mental health care with primary care for children, so that families can receive all care in one place. Engagement with the CMHI model occurs: when a parent brings in a child with behavioral health issues; when a primary care provider refers a child with behavioral health issues; when a primary care provider expresses concerns about a family; when a child or family experiences a new major stressor (e.g., parental separation, diagnosis of a serious illness); and after a comprehensive psychosocial and behavioral health assessment during a well-child visit in the primary care setting. The goal of the CMHI is to achieve practice transformation by successfully implementing evidence-based therapies and interventions in pediatric primary care at the participating community health centers (Codman Square Health Center, Lowell Community Health center, and The Dimock Center).

**Clothing Bank:** BMC's social workers access the clothing bank in real time when a provider contacts Social Work about a basic clothing need for a low-income patient.

**Elders Living at Home Program (ELAHP):** The goal of ELAHP is to help older adults locate and maintain a permanent residence and allow them to live as independently as possible. In FY16, ELAHP served 148 clients: 41 clients received housing search services; 38 clients received housing stabilization services; 50 clients received nutrition services; and 69 clients received homelessness prevention services. All of the elderly men and women placed in housing and provided housing stabilization services have remained successfully housed. All clients suffered from at least one medical disability, and 65% suffered from at least two disabling conditions.

**Grow Clinic:** The Grow Clinic was founded in 1984 by Dr. Deborah A. Frank as part of BMC's Pediatrics Department. The primary goal of the Grow Clinic is to provide comprehensive multidisciplinary medical, nutritional, social services and developmental support to children from the Greater Boston area diagnosed with Failure to Thrive (FTT). Children with FTT have significant difficulty growing because of malnutrition associated with illness, poverty, and family stress. The effects of FTT include shortened attention spans, emotional problems, delayed cognitive development, lasting growth failure, and frequent serious illness, which can result in hospitalization. In FY2016, the Grow Clinic provided medical treatment, nutritional assessment, home health education, social service advocacy, developmental referrals, access to a therapeutic food pantry, children's clothes, diapers, books and educational toys, among other services. At any given time there were approximately 200 children being treated in-clinic. Thirty percent (30%) of clinic patients were 12 months of age or younger; the average age at referral was 29 months; and the average length of treatment was 20 months. Approximately 11% of patient families were homeless and living in shelters. There were 82 new patients during this period.

**Margaret M. Shea RN Adult Day Health Program:** The program holds a license under the Department of Public Health #D06M and offers families peace of mind and a support system to help them care daily for a family member unable to function alone during the day. The program offers intervention programs that provide services in an ambulatory, home-like setting for adults who do not require 24-hour institutional care, but because of physical and/or mental impairment, are not completely able to live independently or remain at home. This allows family members the opportunity to continue to work while their loved one is at a program during the day. A referred participant can look forward to program offerings such as nursing interventions, social services, therapeutic activities, and transportation to and from the program. The program serves

55 individuals with daily a census of 42 and average attendance at 29 daily; participants attend the program up to five times per week with a minimum of two days a week requirement.

**Pediatric Assessment of Communication Clinic (Autism Program):** The Autism Program at BMC is a multidisciplinary, multi-tiered, comprehensive and culturally competent program that is uniquely equipped to meet the complex needs of patients and families. The team is comprised of a Program Coordinator, Autism Resource Specialist, multilingual Family Navigator (FN) and Transition Navigator (TN) that offer specialized outreach, training and advocacy services, form effective partnerships with schools, collaborate with local support organizations and draw upon a deep knowledge base of social service agencies to facilitate linkages to resources. The FN works intensely with patient families to help ensure timely and appropriate treatment for children, which often includes facing financial and economic concerns, language and cultural issues, patient-provider communication, health care system obstacles, transportation problems, and bias/stigma. The TN provides transition-aged youth (14-22 years old) and their families with information, guidance, and resources regarding the transition from school services to adult life and discusses topics such as goal setting, school IEP planning, adult services, and life skills development. The BMC Autism Program also has a well-established social media presence on Facebook, Twitter, Pinterest and Tumblr—which each serve as further venues to provider resource information and guidance to families. In FY16, the Autism Program directly assisted approximately 144 new patients and provided regular follow-up (at least twice per year) to an additional 271 families.

**Pediatric Comprehensive Care for Complex Children (CCCC):** CCCC served a panel of nearly 600 children with special health care needs and their families in FY15. The clinical staff integrates primary care with specialty care and social services for children with neurodevelopmental and emotional/behavioral needs related to pre-term birth, congenital syndromes and chronic health conditions, and/or have experienced trauma as a result of abuse/neglect, parental abandonment, domestic violence, and parental substance abuse. Most of the children seen in the CCCC have complex overlapping health, development and emotional/behavioral issues. Many low-income parents of special needs children tend to engage haphazardly and episodically with the healthcare system and fail to receive appropriate follow-up care and intervention. These parents often face economic hardships, educational barriers, psychosocial stigma, and social isolation as they try to cope with their

children's needs and attempt to maintain stability for their families. The CCCC, with its multidisciplinary approach, sees from 4 to 6 patients per provider per session, considerably less than the 10-12 patients per session in a regular pediatric clinic. Additionally, these team primary care visits allow for attention to routine health maintenance as well as updating complex care coordination; patients may also see a neurologist, pulmonologist, nutritionist, gastroenterologist, and/or a pediatric endocrinologist, when indicated. This "one stop shopping" model of care promotes communication between all members of the child's healthcare team.

**Preventive Food Pantry and Demonstration Kitchen:** The Preventive Food Pantry and Demonstration Kitchen address hunger-related illness and malnutrition among a low-income, largely underserved and vulnerable patient population of Greater Boston. Individuals at risk of malnutrition are referred to the program by BMC or Boston HealthNet physicians or nutritionists who provide "prescriptions" for supplemental food that best promotes physical health, prevents future illness, and facilitates recovery. The Food Pantry now provides nutritional food prescriptions to approximately 6,245 people each month. In FY16, the Pantry provided nutritious food for 72,290 Greater Boston residents. Approximately 12,000 to 18,000 pounds of food supplies are required weekly to stock the Pantry shelves at BMC. The Demonstration Kitchen complements the work of the Pantry by educating patients about nutrition through cooking methods that are compatible with their medical and dietary needs, as prescribed by their physicians.

**Project RESPECT:** Project RESPECT (Recovery, Empowerment, Social Services, Prenatal care, Education, Community and Treatment), is a high risk obstetrical and addiction recovery medical home at Boston Medical Center and Boston University School of Medicine. Project RESPECT provides a unique service of comprehensive obstetric and substance use disorder treatment for pregnant women and their newborns in Massachusetts. The majority of Project RESPECT patients are in recovery from opioid addiction. In-patient, monitored, acute substance withdrawal treatment and induction of opioid maintenance therapies for pregnant woman seeking addiction treatment are provided. Intensive, individualized out-patient treatment plans are outlined for each patient based on the severity of their disease and their recovery progress. The out-patient medical home model provides on site, collaborative and multidisciplinary care for pregnant and post-partum women in recovery. The program supported approximately 150 mother/child dyads in FY16.

**Shuttle Buses/Taxis:** Community access to BMC is enhanced through a free shuttle bus service. Four buses circulate throughout the system on established routes, from 7am-7pm, Monday through Friday, bringing patients to BMC. In FY16, these shuttle buses transported 190,354 patients and their families between BMC and the Boston HealthNet Community Health Centers. There is also a direct taxi and van hospital-to-home service for specific cases.

**StreetCred:** BMC's StreetCred program addresses child poverty by linking low- to moderate-income pediatric patient families to anti-poverty safe-net programs. StreetCred provides free tax-preparation services through well-trained staff and volunteers, who work with families to prepare their taxes and access the EITC and other tax-based programs—for example, SNAP or the FAFSA—for which they may be eligible. The United States federal Earned Income Tax Credit (EITC) is a refundable tax credit for low- to moderate-income working individuals, particularly those with children. In FY16, the StreetCred pilot program provided over \$400,000 in tax refunds to nearly 200 families visiting their pediatricians at BMC. These tax refunds can have a profound positive impact on a family's household budget and, in cases of financial stress, alleviate significant financial burden.

**Supporting Parents and Resilient Kids Center (Spark):** SPARK is a therapeutic day program for Boston's most vulnerable children, including those living with HIV/AIDS; those born very prematurely, those born with neonatal abstinence syndrome; those who have suffered psychological trauma due to abuse/neglect; and those with complex medical and emotional needs. SPARK staff provides medical, educational, nutritional and mental health services to vulnerable children from birth to age 22. SPARK operates an Early Childhood Day Program, a School-Age After-School Program, a young adult Job Training Program and a Summer Camp Program, serving approximately 30 children annually who live in Greater Boston neighborhoods. SPARK helps children to reach their full neurodevelopmental potential, build positive social and emotional skills, cope proactively with health challenges, and learn how to succeed in school and beyond. Additionally, SPARK makes strong investments in families, through a variety of parent education and support programs.

#### 6.1.4.2 CHRONIC DISEASES AND CONDITIONS

**Cancer Support Groups:** In 2006, BMC established the Cancer Patient Support Services Fund to provide crucial services and programs to complement patients' clinical care. The fund is used for survivorship

programs such as support groups and celebrations, assistance with transportation costs to and from the hospital, patient navigation, and the provision of complementary therapies such as yoga and massage. In FY2016, there were 15 on-site cancer support groups and 1 off-site affiliated support group, as well as eight activity groups and seven features program each running 1-4 times throughout the year. There were also 10 annual events, including a survivorship celebration and a trip to Stowe, Vermont for the Weekend of Hope.

**Patient Navigation:** The patient navigation program is designed for patients with cancer and chronic illnesses, such as diabetes, who need special assistance in navigating the health care system. Patient navigators are individuals from the communities served by BMC, who have special language skills, training in scheduling, and refined compassion/communication skills. Patient navigators contact the most vulnerable patients and help them to access the doctor visits and treatment that they need in the most efficient manner possible, arranging transportation for patients, reminding patients about appointments that they helped the patients to schedule, and connecting patients to community resources such as the BMC food pantry.

#### 6.1.4.3 VIOLENCE

**Child Protection Team (CPT):** A special services division of the Department of Pediatrics, CPT serves all of BMC's maltreated pediatric patients. The CPT has three major areas of responsibility: 1) supporting BMC providers to ensure that maltreated children who receive their care at BMC are protected; 2) improving the effective identification and response to maltreatment through innovative research and program development at BMC and nationally; and 3) providing training and education to pediatric health and other professionals in the recognition and management of child maltreatment. The CPT collaborates with community and state agencies, law enforcement personnel and the judiciary system to ensure the best possible outcome for children and families. In FY16, CPT served 2,127 children at BMC.

**Child Witness to Violence Project (CWVP):** CWVP is a nationally-recognized and award-winning mental health counseling, outreach, and consultation program. CWVP specializes in intervention with very young children exposed to domestic or community violence. The program offers both short- and long-term evidence-based treatments that represent best practice in serving the needs of traumatized children and their families. The program provides a flexible combination of services, including

resource advocacy to link families to basic services including health care, child care, housing, and after-school programs. In FY16, the CWVP provided referrals, advocacy, assessment, short-term, and/or longer-term clinical care to approximately 290 families. In addition to its clinical services, CWVP is engaged in extensive local, statewide, and national training efforts to raise the standard of care for young children experiencing the traumatic effects of violence. In FY16, CWVP staff delivered approximately 85 trainings across multiple states and abroad to mental health and other providers across several service sectors and settings, including a presentation at a conference in Prague.

**Community Violence Response Team:** The Community Violence Response Team addresses the great need for services for victims of community violence and their families, as well as family survivors of homicide victims from the Greater Boston area. Free culturally sensitive, family-focused clinical services provided by the CVRT include crisis intervention, advocacy, case management, and trauma-focused counseling for adults, adolescents, and children (with a focus on age eight and over). CVRT seeks to reduce the effects of trauma by providing therapeutic support throughout the recovery process and ultimately minimizing mental health trauma. CVRT staff reflects the diversity of BMC's patient population. In FY16, the CVRT served 934 people.

**Domestic Violence Program (DVP):** The DVP provides training and education for staff, assistance with hospital policy and protocol development, consultation on a variety of clinical and research initiatives, as well as direct advocacy/support services for survivors of domestic and dating abuse. Referrals come from all inpatient and outpatient settings as well as community providers, and the Program also serves BMC employees. In FY16, the Program's Safety and Support Advocates provided approximately 330 victims and survivors with a range of services including crisis intervention/counseling; risk assessment and safety planning; assistance with accessing protective orders and victim compensation; accompaniment to court, legal, medical, housing and other appointments; referral to community-based DV advocacy/rape crisis counseling, medical/mental health services; emergency financial assistance and other support as needed. The Program also provided its first support group for women in Spanish. Advocates provided these services in four languages, utilizing Interpreter Services for additional language needs, and the Program's primary informational brochure about where to find help for domestic violence is now available in 14 languages. In addition to the direct services for victims, the DVP also provided training on how to support survivors of domestic violence safely and effectively to

just over 500 providers from multiple disciplines across the institution, including nursing, criminal justice, mental health, and dental students at area universities. The Program has been integrated into new employee Orientation for all nurses, certified nursing assistants, unit coordinators, social work interns in a variety of departments, and public safety officers.

**Violence Intervention Advocacy Program (VIAP):** In April 2006, BMC piloted VIAP to provide specialized services to victims of community violence, using two community health workers, violence intervention advocates, to provide individual counseling, triage and referral services for victims of gunshot and stabbings brought to the BMC emergency department. VIAP staff collaborates with public and private agencies to offer a broad spectrum of concrete services to patients recovering from these violent injuries. Violence intervention advocates have a strong knowledge of community resources. VIAP provided the following direct services and referral TO SERVICES to victims and impacted family members: crisis intervention and stabilization; housing and transportation; legal educational vocational and life skills development behavioral health employment and health and wellness. In FY16, VIAP provided services to a total of 378 victims: 159 gunshot victims and 219 stabbing victims. Of these victims, 313 were male, 62 were female; THREE were transgender. 65% of the total victims were black, 18% HISPANIC, 11% white, and 11% identified as “other”.

#### **6.1.4.4 MENTAL HEALTH AND SUBSTANCE ABUSE**

**Mental Health Diversion Initiative (MHDI):** Since 2006, the MHDI has worked with 2,603 individuals with mental health and/or co-occurring mental health and substance dependence whose associated behavior brings them to the attention of law enforcement and courts. The MHDI collaborates with the police and courts to first and foremost identify individuals with these risk factors, and then to connect them with appropriate services and treatment as alternatives to arrest and incarceration. The MHDI trains Boston Police Department and Massachusetts Bay Transit Authority officers to identify individuals with mental illness and how to refer individuals to services instead of arresting them. At the court level, 178 MHDI participants have successfully completed probation rather than being incarcerated.

**Alcohol & Substance Abuse Services, Education, and Referral to Treatment (Project ASSERT):** Since 1998, Project ASSERT has been an ongoing component of safety net services at BMC’s Emergency Department (ED). As members of the Project ASSERT team, Health

Promotion Advocates consult and collaborate with hospital staff to offer ED patients alcohol and drug screening, brief intervention, and referrals to health and social resources, such as substance abuse treatment and primary care services. In FY15, Project ASSERT had 4,114 ED and 232 inpatient consults for a total of 4,346 visits. 1,243 patients received referrals to outpatient Narcotics Anonymous/Alcoholics Anonymous, behavioral health, and shelters, and another 232 received a primary care appointment. Project ASSERT also educated patients at risk for opioid overdose and distributed 238 naloxone rescue kits total to ED patients and to family and friends.

## **6.1.5 AFFILIATED HEALTH CARE SYSTEM**

### **6.1.5.1 BMC HEALTHNET PLAN**

BMC HealthNet Plan (BMCHP) and Well Sense Health Plan are non-profit managed care organizations committed to providing the highest quality healthcare coverage to underserved populations. In Massachusetts, BMCHP is the business name for BMC Health Plan, Inc.; outside Massachusetts, Well Sense Health Plan is the business name.

BMC HealthNet Plan serves about 225,000 members across three product lines: MassHealth (Medicaid), SCO, and Qualified Health Plans. It is the third largest Medicaid health plan in Massachusetts.

For 20 years, BMCHP has arranged and coordinated care and services for low-income, vulnerable populations. BMCHP has extensive experience managing the health and social service needs of Medicaid members, many of whom have complex care and support needs. As part of the BMC health system that has been serving Suffolk County for over 150 years, BMCHP brings particular strengths in understanding and serving the diverse needs of members in the service area. In addition to its access to BMC's programs and expertise, BMCHP has an established network of social and community service organizations in the Greater Boston region.

### **6.1.5.2 BOSTON HEALTHNET**

Established in 1995, Boston HealthNet (BHN) is an integrated health care delivery system comprised of BMC, the Boston University School of Medicine, and 13 community health centers (CHCs). Physicians who practice at HealthNet locations provide a wide range of comprehensive health care services to adult and pediatric patients, with a focus on disease prevention and health education. Patients receiving primary care at HealthNet sites have access to highly trained specialists and cutting-edge

technology at BMC while maintaining individualized and culturally sensitive care in their neighborhoods. Now in its 21st year, BHN and its CHC partners have extended BMC's presence into Boston-area neighborhoods, significantly impacting the health of their residents.

The accomplishments of the network are evidenced by: the growth of CHC admissions to BMC; the establishment of an inpatient Rounder System for CHC patients; the collaborative development of quality improvement initiatives, clinical protocols, and standards of practice; increased access to specialty services; a successful public health outreach campaign; and the significant development and coordination of BHN's information technology programs and services.

In 1997, Boston HealthNet established a Community Physician Group Inpatient Rounder System at BMC. The Rounder System brings together physicians from the CHCs and the BMC Department of Family Medicine to care for patients from these centers while they are in the hospital, thereby coordinating and enhancing the quality and continuity of care. In 2008, the Rounder System was extended to evenings and seven day coverage. The Average Length of Stay for FY 2015 for the Rounder System was 4.21 days, which compares favorably with other national and local indices.

Examples of projects on which BMC and Boston HealthNet have collaborated include:

**Information Technology:** Significant strides have been made in the area of Information Technology. All of BMC's primary and secondary partner health centers are connected to BMC over high-speed ELAN connections that put BMC's clinical systems at the fingertips of the health center providers and other staff. In 2001, the partnership between BMC and the CHCs, coupled with a substantial grant from an anonymous foundation, supported the implementation of the Centricity electronic health record (EHR) at eight of the primary partner CHCs. In 2008, implementation was completed at one secondary partner CHC. Additionally, electronic prescribing was implemented at the nine Centricity sites.

- A three year, \$746,246 HRSA award to Boston HealthNet in FY07 supported the vertical integration of electronic medical records at eight CHCs with that of BMC. This integration took place via implementation of a Clinical Information Exchange (CIE) that now allows CHC providers to view information in both BMC and other

CHC systems through the local patient record. The CIE also allows physicians in the CHCs to better track patients receiving care at BMC.

- In 2008, the network was a recipient of a one-year, \$543,000 high impact health information technology grant from HRSA that allowed staff to implement an electronic referral management system between the 10 BHN primary partner CHCs and specialists in the BMC Department of Medicine. By leveraging the technology of the CIE, the eReferral system also makes it possible for the CHCs to schedule appointments, electronically submit required clinical information to specialists, receive electronic information about referrals, track patients' no-show rates, and receive return specialist reports through the local EHR or by opening a web-based practice portal.
- The eReferral Project has helped to eliminate a number of the inefficiencies inherent in the current referral process. Data available from the eReferral Portal shows a significant decrease in lag times to specialty appointments for CHCs patients receiving care at BMC.
- In 2009, BMC approved the expansion of the eReferral Portal to other specialties beyond the Department of Medicine. During 2010, the eReferral Portal was rolled out to all specialty departments as well as two additional health centers. In FY2012, 49,411 referrals passed through the eReferral Portal.
- On June 1, 2010, BHN was awarded a two year \$2.98 million Health Information Technology (HIT) innovations grant from the Health Resources and Services Administration (HRSA). With this funding, BHN is introducing the Integrated Database, Electronic Alerts and Standardized Systems (IDEAS) project – a series of one-time HIT implementations and innovations that will increase the capacity of providers at the CHCs to manage local health care and business operations. Some elements of the IDEAS Project including the installation of Centricity Practice Solutions (CPS) – a clinical and financial management system fully integrated with the Centricity® EHR – at five CHCs, creation of a CHCs data warehouse, clinical registries and computerized physician order entry and result retrieval for lab tests performed at BMC and/or other preferred laboratories. Leveraging the data warehouse with the registries positions BMC and the CHCs to better manage patients with chronic diseases. This improved management is essential to the looming ACO environment with global payments and associated financial risk.

- The BHN IDEAS Project facilitates meaningful use of electronic health records across all three stages of meaningful use, as outlined by the Centers for Medicare and Medicaid Services. It is also responsive to the NCQA Patient Centered Medical Home requirements.
- Starting last year, most BHN Community Health Centers worked collaboratively with BMC as their designated IOO (Implementation and Optimization Organization) through the Regional Extension Center. This government program was established to provide additional assistance to Primary Care Providers in efforts to reach Meaningful Use.
- In 2011, BMC received a one-year \$454,967 grant for the Balanced Scorecard/Safe Sign-outs project. BMC Balanced Scorecard is a continuation project to move to the next level in developing a computer dashboard system to drill down on patient safety and quality. This project focused on the provider level metrics development and testing. Safe Sign-Outs was a new systems development project which created a software system and protocol for resident safe sign-outs to prevent patient adverse events.
- In 2015 and in collaboration with BMC, nine of the BHN CHCs began the process of implementing a new EHR and practice management system that facilitates CHC and BMC provider access to mutual patients' EHRs.
- A two-year \$895,965 Partnership for Community Health grant awarded in 2015 supports BHN's Improving Community Health, an initiative that leverages informatics through a patient portal to enhance patient-engagement. Key goals of the project are to improve blood pressure management among patients with hypertension and ensure that patients do not miss routine cancer screenings.

**Research:** A BHN Research Subcommittee was set up in 2005 to review all research projects for that are proposed at the health centers; 177 projects have been reviewed to date.

**Increasing Patient Access:** Community Access to BMC is enhanced through a free shuttle bus service. Four buses circulate throughout the system on established routes, from 7am-7pm, Monday through Friday, bringing patients to BMC. Last year, these shuttle buses transported 182,985 patients and their families between BMC and the Boston HealthNet CHCs.

**Advancing Medical Education:** A number of HealthNet CHCs also serve as the primary community-based training sites for Boston University School of Medicine pediatric, family medicine, psychiatry and general medicine residents. BUSM students and physician assistants also round at the CHCs to supplement their training with direct patient contact.

### **6.1.6 EMPLOYMENT, WORKFORCE DEVELOPMENT, AND EDUCATIONAL OPPORTUNITIES**

BMC is more than a safety net hospital and provider of medical care to the community. It is a major resource and partner to the community it serves. In a single year, the lives of hundreds of thousands of people are touched through the empathetic and caring work of its employees, practitioners and system-wide partners. In addition to being the largest and busiest provider of trauma and emergency services in New England, BMC serves a critical patient population, with approximately 72 percent of patients coming from underserved populations — including low-income families, elders, people with disabilities, minorities, and immigrants. BMC employs a total of 7,089 people, including 2,997 Boston residents.

In 2016, BMC reimagined three core pieces of its cultural foundation to bring to life the exceptional work it's already doing for patients while allowing its employees to move forward, make confident choices, give voice to employees and leverage their strengths:

- Built on Respect. Powered by Empathy.
- Move Mountains
- Many Faces Create Our Greatness

These three core values give employees a consistent message and foundation about what BMC does and why. This enables them to move the mark in more powerful ways for patients and the community to help move forward on their journey together. BMC is proud of its almost 150 year history, and aspires to motivate each employee to voice their ideas and move together toward one goal. Working together to provide exceptional care without exception, will help the hospital reach its future goal to make Boston the healthiest urban population in the world by 2030.

BMC's mission of exceptional care, without exception also means providing world-class healthcare that is accessible to all, regardless of status or ability to pay. To support its mission, BMC founded the BMC Health Plan (BMCHP) in 1997. This not-for-profit health maintenance organization serves over 215,000 members across the state through several product lines, including MassHealth (Medicaid, including CarePlus) and the Qualified Health Plan.

**Built on Respect. Powered by Empathy:** True to BMC's commitment to the community and its mission, in 2016, the hospital opened The Center for Transgender Medicine and Surgery. The center offers a range of primary care, behavioral health, endocrinology and other surgical services to patients. BMC is the only hospital between Philadelphia and Montreal, and one of only three academic medical centers in the country, to offer this service.

**Move Mountains:** Because of its ongoing commitment to quality and the patient experience, BMC continuously draws in employees who believe in the mission, are willing to move mountains for their patients and are seeking to make a direct and meaningful impact in the Boston community. There are stories across BMC of nurses, providers and administrative staff taking that extra step for one another and for the patients. As one example, nurses in the hospital have been known to throw a baby shower for a new mom who could not afford one.

**Many Faces Create Our Greatness:** One of BMC's greatest strengths is its diverse work force. With approximately 6,300 employees (including full and part time), 46 percent of those employees identify with a minority group (African American, Hispanic, Asian, etc.) Its workforce's diversity, much like the diversity of their patients, has allowed BMC to build strong and trusting relationships with their patients. Diversity is at the heart of the hospital, continuously striving for inclusion.

About 30 percent of BMC's patient population does not speak English as a primary language. The Interpreter Services Department at BMC is one of the most extensive in New England. Not only does the Interpreter Services Department provide face-to-face interpreters on-site in 15 spoken languages, they also utilize the latest advances in technology in order to provide interpreting services 24 hours a day/365 days a year to patients in 240 languages.

BMC is proud of its incredibly diverse staff, patients and culture. BMC's culture is in part shaped by diversity at its broadest definition including thought, experience, race, gender, sexual orientation, age, and more. As such, BMC aims to reflect the multiple perspectives of its staff and patients through its mission and daily work.

To engage and empower the workforce, employees are offered competitive wages and benefits packages, educational assistance, tuition reimbursement, opportunities for professional advancement, mentoring, skill-based training seminars among other opportunities throughout the year.

#### **6.1.6.1 COMMUNITY ENGAGEMENT SUPPORT**

BMC provides opportunities for employees to connect with students, patients, members of the community to develop working relationships. Quite often these relationships blossom into strong professional

partnerships and/or employment opportunities throughout the organization.

BMC's Community and Partnership Office provides educational tours, job shadowing opportunities, and internships throughout the year for students who attend schools within Boston. Students from Boston Collegiate Charter High School and Boston Area Health Education Center (BAHEC) spent time shadowing health care professionals in clinical areas to explore careers in healthcare. This year a new partnership was established with the Madison Park Development Corporation and placed two students to work at BMC.

BMC leaders mentor Boston area students interested in careers within the medical field. Programs BMC collaborates with include Big Sisters, YMCA Achievers, as well as, YMCA Training, Inc., The Salter School, and Lincoln Technical Institute.

The Demonstration Kitchen is a fully equipped modern kitchen which provides free classes on how to cook healthy meals. The demonstration kitchen is an excellent resource for patients and employees with various medical conditions including diabetes, cancer, obesity, food allergies etc. to learn how to eat healthy. Meals are taught and prepared by BMC's own registered dietician and chef.

BMC has created multiple new partnerships with key community-based organizations to provide coordinated care models targeting social determinates of health (i.e. a patient's economic stability, food security, and access to care). Resources are available in clinics at BMC and through the community to elevate the social conditions impacting patients' health.

#### **6.1.6.2 YOUTH PROGRAMS**

**Cristo Rey High School Partnership:** Through this relationship, a four-student team fills one work-study full-time position on a rotational basis that equals a 40-hour workweek during a ten (10) month period. Students provide services for the organization while gaining valuable work skills and exposure to working in a business environment.

**YMCA Training, Inc.:** YMCA Training, Inc. provides adults with job skills training to help them obtain living-wage employment. BMC partners with YMCA Training, Inc. by providing customer service training and offering internship opportunities. In the past year, BMC has hired 7 graduates of YMCA Training, Inc. as PatientAccess Reps and Ambulatory Services Reps. In the past 20 years, BMC has hired approximately 110 Training,

Inc. graduates with an almost 80% 6 month retention rate. 94 Training, Inc. trainees have interned at BMC

**Boston Area Health Education Center (BAHEC):** BAHEC, a Boston Public Health Commission program, aims to diversify the pool of health professionals in Boston by encouraging youth to pursue careers in health and public health. BAHEC develops, implements, and evaluates in-school and after-school enrichment programs and events for middle and high school aged youth from Boston. The BAHEC's Youth to Health Careers (Y2HC) initiative works to increase youth knowledge, awareness, and pursuit of health careers through academic enrichment, job shadowing, leadership training, and college preparation. Central to the Y2HC initiative is a six-week Summer Enrichment Program, during which participating students take courses in math, science, public health, and personal wellness topics such as nutrition and healthy relationships. Students also participate in an internship in a medical or public health setting. BMC hosted 5 interns who were placed in five different departments such as Nursing, Dentistry, Dermatology, and the Ob-Gyn, Surgical and Renal Clinics

**Boston Collegiate Charter High School 10th Grade Career Day:** The program is designed to introduce students to industries they may have previously known little or nothing about. The goal of the program is to help inform the college and career choices for each student. The intention is that the experience will not only encourage students to reimagine their futures, but also help them gain a better understanding of the educational requirements of various professions.

**Boston Collegiate Charter High School Junior Internship Program:** The program is designed to introduce students to industries they may have previously known little or nothing about. The goal of the program is to help inform the college and career choices for each student. The intention is that the experience will not only encourage students to reimagine their futures, but also help them gain a better understanding of the educational requirements of various professions.

**Jeremiah E. Burke High School Job Shadow Day:** The program is designed to introduce students to industries they may have previously known little or nothing about. The goal of the program is to help inform the college and career choices for each student. The intention is that the experience will not only encourage students to reimagine their futures, but also help them gain a better understanding of the educational requirements of various professions.

### **6.1.7 ANNUAL PROPERTY TAXES/PILOT**

Although much of BMC's property is tax-exempt, BMC contributes annually to the City of Boston's Payment in Lieu of Taxes (PILOT) program.

### **6.1.8 OTHER ECONOMIC BENEFITS**

BMC's community goals are to continue to provide effective and accessible services to vulnerable populations in the Boston community and to continue to expand efforts that deepen relationships with the communities they serve. In fiscal year 2014, BMC invested \$7,352,431 in Community Benefits Programs (as reported to the IRS on Form 990 Schedule H, Part I, Line 7e, column e, net community benefit expense).

BMC contributes to the local economy through employment of Boston residents and the purchase of goods and services from Boston businesses. BMC spent approximately \$410,047,473 in fiscal year 2016.

## **6.2 COMMUNITY BENEFITS – BOSTON UNIVERSITY**

While renowned for its quality of teaching and research, and for providing education and training aligned with the most current thinking and techniques in the field, the BU Medical Campus prides itself on a legacy of service to the community, particularly service to the most disadvantaged, underserved, and indigent populations.

The BU Medical Campus is composed of the Boston University School of Medicine, the SPH, and the GSDM. Utilizing resources provided by BU Medical Campus administration, each school offers a wide variety of community programs, resources, and services related to their respective concentrations and specialties. In addition to these University-sponsored community programs, BU Medical Campus plays an important role in the economic vitality of both the city and the state, attracting and training a diverse group of more than 3,000 students and employing more than 1,300 faculty members, many of whom are leading experts in their fields. Beyond its direct employment impact, BU Medical Campus creates and supports more than 6,400 jobs and generates \$712.2 million in economic impact in Massachusetts each year.

### **6.2.1 A TRADITION OF COMMUNITY SERVICE**

Over a hundred years ago, Boston University's third president described BU as an institution "in the heart of the city, in the service of the city." This description rings truer today than ever, and serves as the basis for Boston University's extensive and ever-growing array of community benefits and services.

In addition to Boston University's status as the long-standing leader in PILOT (payment in lieu of taxes) contributions – totaling \$6.1 million in FY16 - to the City

of Boston each year, Boston University's signature community benefit is its Boston Scholars Program. A multi-faceted scholarship program benefitting graduates of Boston Public Schools (BPS), the Boston Scholars Program, which includes the Thomas M. Menino Scholarship Program and the Community Service Scholarship Program, is the largest and longest-running program of its kind in the country.

#### **6.2.1.1 THOMAS M. MENINO SCHOLARSHIP PROGRAM**

The Thomas M. Menino Scholarship Program was previously known as the Boston High School Scholarship Program and was renamed for Mayor Tom Menino in June 2013 to celebrate the late Mayor's involvement in the program and his passion for education. Each year, 25 exceptional Boston Public High School seniors are awarded four-year, full-tuition merit scholarships to Boston University. Since the program's inception in 1973, an estimated 1,870 students have received nearly \$125 million in scholarship funding.

#### **6.2.1.2 BOSTON UNIVERSITY COMMUNITY SERVICE SCHOLARSHIP PROGRAM**

In 2009, in an effort to further expand scholarship opportunities for local students, the University committed to meeting the full financial need (without loans) of any Boston Public School ("BPS") graduate admitted to Boston University through the creation of the Community Service Scholarship. The Boston University Community Service Scholars constitute the only cohort of students anywhere for which the University makes this uncapped, no-loan commitment of financial aid. Since the program's inception in 2009, an estimated 350 BPS students have received more than \$38 million in scholarship funding.

#### **6.2.1.3 SCHOLARSHIP PROGRAM EXPANSION – BPS TRANSFER STUDENTS**

In December 2017, Mayor Walsh and Boston University announced the expansion of its Community Service Scholarship program, which had previously been limited to incoming freshman, to include incoming transfer students who are Boston Public Schools ("BPS") high school graduates beginning in the fall semester of 2017. This expansion builds on Mayor Walsh's commitment to expanding higher education opportunities for all BPS students.

In the fall of 2016, BU admitted 1,785 transfer students, who would now be eligible for the expanded scholarship program. All transfer students are eligible, including students who attend a two-year community college

program before graduating with an associate's degree and transferring to a four-year institution for a bachelor's degree.

## **6.2.2 COMMUNITY PROGRAMS**

Beyond these signature institutional community benefits programs, the BU Medical Campus' longstanding tradition of community service has led to the development of programs and services that are now fixtures within the community. These programs, which continue to thrive under BU Medical Campus' long-term support and investment, have become dependable sources of care and information for community members. Such programs include:

### **6.2.2.1 ALZHEIMER'S DISEASE CENTER**

The Alzheimer's disease Center is one of 31 federally funded Alzheimer's disease Centers nationwide. Its goal is to help reduce the human and economic costs associated with Alzheimer's disease through the advancement of knowledge. The center provides educational and clinical resources to patients, aging control subjects, and caregivers, while charting the course of the disease and age-related changes in the research groups followed by the center. In addition, the center provides state-of-the-art diagnostic services and a collection of well-prepared brain material appropriate for the research requirements of local and national research efforts.

### **6.2.2.2 BOSTON UNIVERSITY ARTHRITIS CENTER**

Boston University Arthritis Center is an internationally recognized center in research, patient care and education. The Center was established in 1983 to advance basic, clinical, and epidemiological research in rheumatology and to translate laboratory findings into new therapeutic strategies. The Center unifies extensive basic, translational and clinical research, medical education, and patient care. Arthritis Center faculty provide clinical and research expertise in general rheumatology, Scleroderma, Vasculitis, and Clinical Epidemiology. Multidisciplinary programs in scleroderma and vasculitis are highly integrated with experts in many specialties, including those in pulmonary and pulmonary hypertension. Clinical care is provided at BMC's state-of-the art out-patient and in-patient facilities. The Center's clinical research teams have been at the forefront of developing new approaches to study and test new treatments for scleroderma, osteoarthritis, vasculitis and other autoimmune disorders.

### **6.2.2.3 THE CENTER OF EXCELLENCE IN SICKLE CELL DISEASE**

The Center of Excellence in Sickle Cell Disease, directed by Martin Steinberg, M.D., supports the highest quality of patient care in an attempt to make BMC (BMC) the treatment facility of choice for Boston-area patients with sickle cell disease. The Center also promotes interactive basic and clinical research and patient and professional educational activities.

### **6.2.2.4 BOSTON UNIVERSITY AREA HEALTH EDUCATION CENTER**

Since 1978, the Boston University Area Health Education Center (“BU AHEC”) has sought to foster an interest in primary care careers for medical students and residents, and to support the practice and teaching of primary care medicine in the community. The center works to increase the training of medical students in community-based practices, developed many office practices of family physicians as teaching sites, established the Tufts Family Medicine Residency Program, and built the framework for the new Department of Family Medicine at Boston University School of Medicine. Additionally, the BU AHEC is one of 8 Regional AHECs around Massachusetts which support the entry of minority youth into health careers and interpreter training, and offer continuing education programs for health professionals.

### **6.2.2.5 BOSTON UNIVERSITY GERIATRIC SERVICES**

Sponsored jointly by the School of Medicine and the BMC, this program is the oldest continuously operating home-medical service in the United States. Boston University Geriatric Services provides an array of health services for Boston’s elderly, including medical care for patients in their own homes. The program makes approximately 5,000 home visits to 800 elders each year, thus enabling many patients who would otherwise require placement in nursing homes to remain independent. No patient is ever denied service for lack of ability to pay. Since 1875, physicians and medical students have been delivering health care to patients in their homes, where they feel most comfortable.

### **6.2.2.6 BOSTON HEALTHCARE FOR THE HOMELESS PROJECT**

The Boston University School of Public Health, along with BMC, assists the Boston Health Care for the Homeless Program in the development of methods to improve strategic planning, especially for funding. Department faculty assist with developing data on the use of sub-acute medical care provided to Boston’s homeless population at the program’s

two respite centers in Boston. The School of Public Health assists by gathering data and demonstrating how the utilization of these respite centers reduces hospital admissions, readmissions, and emergency utilization, thereby impacting the costs of care.

#### **6.2.2.7 REFUGEE AND IMMIGRANT HEALTH PROGRAM**

Since 1996, the Refugee and Immigrant Health Program, a joint project of the Boston University School of Medicine, the Boston University School of Public Health, BMC, and Global Lawyers and Physicians, has actively cared for the medical, psychological, legal and social needs of over 500 clients from over 50 countries annually, who currently live in the Boston area. The multidisciplinary program provides services for refugees and survivors of torture and related trauma. These services include: primary health care; mental health services; referrals for medical specialties; neuropsychiatric evaluation; dental evaluations; physical therapy; referral and consultation for legal services; social services; English classes; creative therapies; and vocational rehabilitation. The program also offers a clothing bank, access to the BMC Food Pantry, and ethnic community support groups.

#### **6.2.2.8 FRAMINGHAM HEART STUDY**

Undertaken in 1948, the renowned Framingham Heart Study is the longest-running prospective epidemiological study in history. The study has produced important discoveries related to the major risk factors associated with cardiovascular disease, which is the leading cause of death and serious illness in the United States. The study is run in partnership with the Boston University School of Public Health and the Boston University School of Medicine.

#### **6.2.2.9 BLACK WOMEN'S HEALTH STUDY**

The Black Women's Health Study is the largest follow-up study on the health of African American women. Since 1995, the study's main aim has been to identify the causes of cancer and the factors that contribute to the disproportionate impact that many illnesses, including hypertension, breast cancer at young ages, diabetes, stroke, and lupus, have on black women.

#### **6.2.2.10 BOSTON UNIVERSITY SCHOOL OF PUBLIC HEALTH STUDENT PRACTICUM**

The Boston University School of Public Health (BUSPH) Office of Public Health Practice facilitates connections between BUSPH, local practice partners, and the national and international public health community, in order to promote sound public health practice. School of Public Health students participate in a practicum, which allows them to integrate and apply classroom learning in a public health work environment. Students devote hundreds of hours working at local public health agencies contributing to solutions to public health problems and developing practical skills and personal confidence as public health professionals. These local partnerships foster collaboration between Boston University and neighboring communities, and provide students with important opportunities for professional growth through service to their community.

#### **6.2.2.11 GSDM COMMUNITY PROGRAMS**

The mission of the Office of Global and Population Health (GPH) is to develop, promote, and sustain interdisciplinary domestic and international health initiatives with the aim of enhancing the educational experience of students and improving the health of the global community. The Office actively supports students, faculty, and staff in their efforts to improve the health of the world's populations, and facilitates interdisciplinary health research, teaching, and practice across all departments and programs in the University, with a special emphasis on global health.

**Teaching:** GPH faculty contributed to GSDM pre and postdoctoral courses on preventive and community dentistry, preclinical general dentistry, and community based rotations. Faculty served as course directors, lecturers, preclinical instructors, thesis readers, and mentored the fourth year students in their community outreach projects completed during their Externship.

**Community Based Education:** As part of the first year DMD curriculum's *GD 510* course, GPH faculty and staff managed the community-based experiences that serve as the foundation for the students' service learning activities. During these experiences, under the supervision of GPH faculty each first year student created grade-level appropriate lesson plans, conducted oral health education for classrooms, and provided preventive services (dental screening, sealants, and fluoride varnish treatments) to students enrolled in five public elementary schools in Boston. For the third

year, GPH offered GSDM students greater experience in pediatric dentistry for children 0-5 years of age. Third-year DMD and first-year AS students were given opportunities to provide screenings and preventive services to children in some of GPH's existing preschool-based oral health programs. A GPH faculty member supervised GSDM student volunteers on fourteen occasions at either the Crispus Attucks Children's Center in Dorchester, the Nurtury Child Care Program on Tremont Street in Boston or on Horadan Way in Roxbury, or at Countdown to Kindergarten at the Boston Children's Museum. Forty-eight students provided dental screenings, fluoride varnish applications, and oral health education to the children enrolled at these sites between September and December. For the first year, as part of DMD's fourth year pediatric rotation, students provide preventive and restorative services to children in Boston's Orchard Gardens K-8 School under the guidance of GPH faculty.

**Advising/Mentoring:** GPH faculty served as advisors for GSDM students, faculty, alumni, and community members interested in community-based clinical research, public health, and community service; and as mentors to pre and postdoctoral students' community outreach and research projects. Additionally, GPH faculty supervised one Sargent College student in a semester internship program and three pre-dental students from several other colleges and programs in volunteer activities with GPH.

**Service:** GPH faculty provided service to the profession and the community. Dr. Michelle Henshaw served on the Massachusetts Association of Community Health Workers' Oral Health Advisory Board, as a member of the Boston Task Force on Improved Perinatal Clinical Care, as a member of the Healthy Birth Boston, as a member of the Massachusetts Coalition for Oral Health, on the Advisory Boards of both the Massachusetts Early Childhood Oral Health Consortium and the Better Oral Health for Massachusetts Coalition, and on a National Institutes of Health Grant Review Panel. Kathy Lituri served as Oral Health Consultant to ABCD Head Start and Early Head Start and as a member of the Health Advisory Board of the South Boston Head Start, Dorchester Early Head Start, and Roxbury Early Head Start. She also served as a dental representative of the Boston Eligible Metropolitan Area (EMA) Planning Council and on the Boston EMA Planning Committee. On a national level, Kathy Lituri continued to serve as Chair of the Oral Health Section of the American Public Health Association (APHA) and as a member of several Oral Health Section committees, including the Scientific Program Planning Committee and the Student Award Committee. Dr. Corinna Culler served as a member of the Massachusetts Early Childhood Oral

Health Consortium, as Chair of the Surveillance Work Group for the Better Oral Health for Massachusetts Coalition, and on a national level, as Chair of the Council on Publications for the American Association of Public Health Dentistry. Dr. Mohammad Mourad served on the Lawrence Mayor's Oral Health Task Force and the Health Services Advisory Committee for Lawrence Community Day Care's Early Head Start Program, and Dr. Gladys Carrasco served on the CAPIC Head Start Health Advisory Committee and the Chelsea Family Network Advisory Council, both in Chelsea, Massachusetts.

### **School-Based Oral Health Programs**

The Office of Global and Population Health at the GSDM currently runs five city wide school-based oral health programs that operate in 62 schools and 21 preschools in Boston, Chelsea, Framingham, Natick, and Lawrence. These programs deliver preventive services including oral health education, dental screenings, fluoride applications, and sealant placement to thousands of children. Through its school-based programs during the 2015-16 academic year, 17,880 children were served. Of those children, 16,374 were provided oral health education, 5,889 received oral screenings, 5,799 received fluoride, and 1,486 children received 4,516 dental sealants.

**Chelsea Comprehensive School-Based Dental Program:** For the 16<sup>th</sup> year in Chelsea, GSDM provided city wide comprehensive services including classroom education, dental screenings, dental sealant placement, fluoride varnish applications, and restorative dental care for children enrolled in Chelsea's five public elementary schools. Through partnerships with CAPIC Head Start and the Chelsea Family Network, services are also provided to many of Chelsea's preschoolers. This comprehensive oral health program is included in the Agency for Healthcare Research and Quality's Health Care Innovations Exchange, a national program designed to support health care professionals in sharing and adopting innovations that improve the delivery of care to underserved patients.

During the 2015-16 school year, this school-based program provided classroom oral health education to 2917 students in pre-kindergarten through grade four in Chelsea Public Schools. Dental screenings were provided to 1575 students, fluoride varnish treatments to 1558 students, and 904 dental sealants were placed on 305 first through fourth graders.

Since opening in April of 2003, GSDM's Chelsea School Dental Center

(CSDC) has provided preventive and restorative services for thousands of children. Located in the Williams Middle School, the CSDC gives care to Chelsea public school students regardless of their grade level or ability to pay for services. Many of the patients, who range in age from preschoolers to high school seniors, have never been to the dentist and would have no other source of dental care if it were not for the CSDC. Five bilingual dentists devote time to treating patients in the center.

**Framingham School Dental Program:** GPH operates a town wide school-based dental program for grade school children within eight public elementary schools. During the 2015-16 school year, oral health education was provided to 2969 students in grades kindergarten through fourth grade. Additionally, 809 children received a dental screening and fluoride treatment. A total of 578 sealants were placed on 176 children.

**Lawrence School Dental Program:** Children in all nine elementary schools and four middle schools in the City of Lawrence are provided oral health education, dental screenings, fluoride applications, and sealants. In total, GPH faculty and staff presented oral health education to 5596 students, dental screenings and fluoride for 1591 students, and 1077 sealants were placed on 344 students.

**Natick School Dental Program:** GPH runs a town wide school-based dental program for grade school children within all five public elementary schools in Natick. During the 2015-16 school year, 544 children received oral health education, 99 received oral screenings and fluoride, and 120 sealants were placed on 34 children.

**Smart Smiles in Boston Public Schools:** During the 2015-16 school year, GPH provided education for 3726 children; dental screenings, fluoride application and dental cleanings for 1282 children; and 1131 sealants were provided to 372 children in 31 Boston Public Schools including: Beethoven, Boston Teachers Union, Clap, Conley, Dudley Charter, EDCO Youth Alternative, English High, Everett, Grew, Hale, Haley, Henderson Lower, Higginson-Lewis, Holmes, Hurley, Kilmer Lower, Kilmer Upper, Lyndon, Mason, McKay, McCormack Middle School, Mission Hill, Mozart, Orchard Gardens, Perkins, Roosevelt Lower, Roosevelt Upper, Sumner, Trotter, Winthrop, and Young Achievers. In addition to preventive services, restorations were provided at the Orchard Gardens School during the 2015-16 school year. Supervised by GPS faculty, DMD 4 students worked at this school as part of their pediatric rotation. Three hundred sixty restorations were completed for 141 children.

### **Preschool-Based Oral Health Programs**

GSDM's community outreach programs provide screenings and/or oral health education to over 2000 children in Boston area preschools, day care centers, Early Head Start, and Head Start programs and oral health education to preschool administrators, staff, teachers, and parents.

**Action for Boston Community Development (ABCD) Early Head Start (EHS):** GPH faculty conducted Early Head Start oral health examinations, fluoride varnish, and referrals for children enrolled in eight ABCD Early Head Start Centers located in Bradshaw, Dorchester, East Boston, Jamaica Plain, Parker Hill, Roxbury, South Boston, and the South End.

**Chelsea Family Network:** GPH faculty provided oral health education and dental screenings for 30 children between the ages of three and five years at Kangaroo's Pouch during the 2015-2016 school year.

**Community Action Programs Inter-City (CAPIC) Head Start:** Dental screenings and fluoride applications were provided twice during the 2015-2016 school year for 265 Head Start children ages three to five years enrolled in the CAPIC Head Start (Chelsea, Revere, Winthrop) Program.

**Crispus Attucks Children's Center:** GPH faculty and 12 GSDM students visited the Crispus Attucks Children's Center in Dorchester as part of the school-based dental outreach program. For four days, the team went into six classrooms of children ages three to six years old. During the visits, the children took part in circle time where the GSDM students engaged them in hands-on dental health lessons. The 190 children participating received dental screenings and oral hygiene supplies.

**Framingham South Middlesex Opportunity Council (SMOC) Head Start:** As a part of the Framingham School Dental Program, 190 preschool age children were provided oral health education, and 86 children received dental screenings and fluoride treatments.

**Greater Lawrence Community Action Council Child Care Center:** Oral health education was provided for 162 preschool children, and dental screenings and fluoride varnish was applied for 40 children enrolled at the Greater Lawrence Community Action Council Child Care Center.

**Government Center Child Care Corporation:** GPH faculty presented an oral health lesson to 28 preschool children enrolled in two classes at the Government Center Child Care Corporation in Boston.

**Lawrence Community Day Care Early Head Start:** Oral exams and fluoride varnish treatments were conducted for 67 infants and toddlers enrolled in Lawrence Community Day Care's Early Head Start Program.

**Nurtury (formerly known as Associated Early Care and Education):** GSDM pre-doctoral students joined GPH faculty for nine days of dental outreach at four sites run by Nurtury, a preschool-based program serving infants, toddlers, and preschool-aged children. GSDM students engaged the children with the use of puppets, taught them a tooth brushing song, and provided screenings and fluoride varnish applications. This activity is linked with the third year pre-doctoral Pediatric Dentistry course for DMD3 and AS2 students and is designed to provide pre-doctoral students additional experience with pediatric patients in non-clinical settings and improve the oral health of preschool age children.

**Pine Village Preschool:** GPH faculty presented an oral health lesson to 30 preschool children enrolled in three classes at the Pine Village Preschool in Boston's South End.

**Project Hope:** Seventeen preschool children at Project Hope received oral health screenings, fluoride, and oral health lessons.

### **Community Outreach and Partnerships**

GPH continued to expand its community outreach activities and recruit dental students, faculty, and staff volunteers into its various service programs. In 2015-2016, 69% of GSDM's pre-doctoral students, 415/600, participated in school-sponsored service activities, including community outreach activities and roles as teaching assistants and admissions tour hosts. Of the 415 students who participated in one or more of GSDM's service activities, 305 (73%) of students participated as volunteers and 110 (27%) participated as part of their ongoing curriculum. Additionally, 15 postdoctoral students and 107 faculty and staff volunteered to serve in one or more community outreach activities.

Strategic partnerships with 145 organizations form the foundation for many of the research, teaching, and service programs managed by GPH. These partnerships strengthen community outreach as GPH collaborates on programs and events that reach thousands of individuals and families in Boston and its surrounding communities. This year many new collaborative events occurred with both current and the following new partners: Al Huda Society, City of Boston Veterans Services, McGlynn Elementary School, Pine Village Preschool, Project Hope, Raising a

Reader Massachusetts, Saint Anthony's Shrine, Susan S. Bailis Assisted Living, and Work Inc.

### **Community Based Oral Health Promotion Programs**

In addition to GSDM's work in Boston area elementary schools and preschools, the School was involved in 117 programs and activities, including: 37 new, oral health promotion programs, initiatives, school field trips, and other community-based outreach activities. These programs and events have reached individuals of very diverse backgrounds and educational levels, including populations such as the homeless, those with special needs, the financially disadvantaged, the uninsured and underinsured, elders, refugees, and individuals with HIV, that have difficulties accessing oral health services. At the same time, GSDM's pre-dental, pre-doctoral, and post-doctoral students have been trained to provide oral health services for underserved, at-risk populations.

### **2016 Global Days of Service – GSDM Service Events and Collections**

Throughout April 2016, Boston University faculty, students, staff, alumni and their families and friends participated in Global Days of Service, an initiative offering service opportunities to Boston University friends worldwide. At GSDM, Global and Population Health and Alumni Relations coordinated many volunteer opportunities designed specifically for the GSDM family. The number of faculty, student, staff, and alumni volunteers during 2016 Global Days of Service almost doubled from the number of volunteers in 2015.

This year's Global Days of Service events include the following:

- Al Huda Society's Healthy Smile: Healthy You
- American Red Cross Blood Drive
- Charles River Cleanup
- Cradles to Crayons Giving Factory
- Greater Boston Food Bank (5 volunteer events)
- Haley House Bakery & Café (14 volunteer events)
- Notre Dame Education Center
- Raising a Reader Family Fun Day
- Relay for Life
- Rosie's Place at Franklin Field

- Rosie's Women to Women Program
- St. Catherine of Siena School 4<sup>th</sup> Grade Classroom Education
- Ricesticks and Tea Asian Food Pantry
- St. Francis House Service
- Susan S. Bailis Assisted Living
- Winthrop School's Health & Wellness Fair
- Work Inc.
- Yawkey Club of Boston Give Kids a Smile Dental Health Fair (two volunteer events)

### **GSDM's Community-Based Programs**

**Action for Boston Community Development (ABCD) Early Head Start (EHS) Teacher Workshops:** Held at the EHS Child Care Centers located in Charlestown, East Boston, and Dorchester, staff and the ABCD health manager participated in an informative PowerPoint presentation and engaging discussion regarding information and guidance on oral health issues specific to preschool children.

**American Student Dental Association (ASDA) Winter Clothing & Oral Health Kit Drive:** Members of GSDM's ASDA Community Outreach Committee held a winter clothing and oral health kit drive to benefit Boston's homeless and underserved. Donations included winter clothing, blankets, socks and oral health supplies. These were given to Rosie's Place and to the BU Medical School for distribution through its Outreach Van.

**Boston Medical Center Diabetes Group Oral Health Presentation:** A GSDM student and faculty member led a workshop on oral health recommendations for diabetes management for a group of people with diabetes who meet monthly for support.

**Boston Medical Center (BMC) Preventive Food Pantry Drive:** In February, three DMD students representing GSDM's chapter of the American Student Dental Association delivered 592 food items to the BMC Preventive Food Pantry, items which were donated by students, residents, faculty, and staff of GSDM. The Food Pantry distributes food to referred patients from all BMC clinics, feeding approximately 80 families per day.

**East Boston High School Presentation, *Promoting Dentistry as a Career:***

As a part of *Passport to College*, a Program for urban youth to improve access to higher education, a GSDM Advanced Standing student spoke to 100 students at East Boston High School about the importance of finishing high school and aiming for a career in the dental field.

**Elementary School Field Trips to GSDM:** Each year GSDM invites local elementary school second and third grade children to visit the school for a full day of oral health activities, including presentations on oral health and nutrition, a lesson on mouth guards, and interactive activities in the Simulation Learning Center in which they learn about sealants and dental impressions. These field trips provide both interactive health education for children as well as an opportunity for Boston University dental students to inspire young children to pursue a higher education and possibly a career in dentistry. This year the following schools participated: Orchard Gardens School Field Trip: 69 second grade children; Blackstone School 17<sup>th</sup> Annual Field Trip: 106 third grade children.

**Framingham South Middlesex Opportunity Council (SMOC) Head Start**

**Parents Night:** As part of the Framingham School-based Oral Health Program, two oral health information sessions were presented to 70 SMOC staff and parents of enrolled children, providing an opportunity to educate both staff and parents about oral health and to increase parents' awareness of the many community services available to them in the Framingham area.

**Healthy Smile, Healthy You:** GSDM's Muslim Student Association, in collaboration with the Islamic Society of Boston Cultural Center in Boston and Al Huda Society in Chelsea organized two Healthy Smile, Healthy You events for their local communities. At the two events, 49 GSDM students, faculty, and volunteers provided a wide range of oral health promotion activities, including 109 screenings and referrals.

**McGlynn Elementary Kindergarten Oral Health Presentation:**

Classroom dental education was provided to kindergarten children enrolled at McGlynn Elementary School in Medford. The children enjoyed interactive activities such as counting and brushing the teeth of a dental puppet, and goodie bags were distributed at completion of the program.

**Notre Dame Educational Center (NDEC) Oral Health Promotion:**

GSDM faculty and students from the BU chapter of the American Student Dental Association served at the annual Notre Dame Educational Center Dental

Health Fair, where they conducted dental screenings and promoted oral health. The volunteers gave one-on-one oral health instructions, demonstrated flossing, and had visitors practice on a model. Since NDEC students are also eligible to enroll in the Boston University GSDM student dental health plan, the benefits of enrollment in the plan were explained. **Samaritan's Purse and Compassion International Donations of Oral Hygiene Products:** GSDM donated 24 dozen toothbrushes and 12 dozen toothpastes to two organizations for distribution to families in Haiti and El Salvador.

**St. Catherine of Siena School 4<sup>th</sup> Grade Classroom Education:** GSDM students visited a fourth grade classroom at St. Catherine of Siena School in Norwood to talk with the children about oral health. A variety of interactive educational materials were used and goodie bags were handed out at the conclusion of the program.

**Susan S. Bailis Assisted Living Oral Health Presentation:** Two events were held at the Susan S Bailis Assisted Living Home in Boston. GSDM students gave a 20-minute PowerPoint presentation and question-answer session focusing on the importance of oral health and oral hygiene techniques. Volunteers and residents played BINGO, and toothbrushes and toothpaste were given out as prizes. One of the two events was held in the spring for BU Global Days of Service and was planned by the ASDA Diversity and Inclusion Committee in collaboration with Global and Population Health.

**Work Inc. Oral Health Workshops:** Twice in the spring GSDM volunteers visited Work, Inc., a nationally recognized community-based program for individuals with disabilities. The first workshop targeted the adults receiving support from Work Inc. while the second workshop was for the caregivers at the agency. Each session provided an opportunity for attendees to receive oral hygiene and dental health recommendations and interact with GSDM faculty and students.

**Yawkey Club of Roxbury Passport to a Healthy Smile Dental Health Fair:** The GSDM chapter of the American Student Dental Association (ASDA) participated in two events for children who attend the Yawkey Club of Roxbury, a Boys and Girls Club of Boston. During the first event, student volunteers prepared the educational materials and games for the Yawkey Club Health Fair and for the second event, the students engaged the 200 children at the fair with the interactive educational activities they had prepared and gave out the goodie bags they had assembled. The GSDM chapter of ASDA works with Global and Population Health to host this

event each year as part of Give Kids a Smile, a nationwide initiative co-sponsored by the American Dental Association. At this annual event, children visit five dental themed tables to learn about proper brushing and flossing; healthy eating; tooth protection such as mouth guards, fluoride, and sealants; smoking and oral piercing; and careers in dental medicine. In addition, on two separate occasions in August of 2015, GSDM students served at the Yawkey Club of Roxbury during GSDM orientation.

### **GSDM's Collaboration with Other Community-Based Programs**

**Baldwin Early Learning Pilot Academy Steps for Success:** Oral health promotion activities were carried out and dental screenings offered to the 50 three to six year old children attending this Baldwin School event. Fun, interactive oral health games and activities were enjoyed by children and their parents.

**Bay Cove Human Services Wellness Fair:** Bay Cove Human Services is a private, non-profit corporation that provides a wide range of services to individuals and their families with developmental disabilities, aging, mental illness, and drug and alcohol addiction. Bay Cove holds wellness fairs to improve health awareness through education and prevention. At this year's annual fair held at the Gill Wellness Center in Jamaica Plain, oral health promotion activities were provided by members of GSDM's student chapter of the American Association of Public Health Dentistry and Global and Population Health faculty. The volunteers offered oral health education, screenings, and referrals to the fairgoers.

**Boston Area Health Education Center (BAHEC) Youth 2 Health Careers Health Expo:** BAHEC aims to diversify the pool of health professionals in Boston by increasing middle and high school students' awareness of health professions and public health issues and concepts. The annual Expo event connects Boston adolescents who are interested in exploring health careers with health professionals representing a broad range of career fields. GSDM presented information on careers in dentistry and its benefits. Seventy-five high school students in attendance had the opportunity to ask questions about opportunities within the dental profession.

### **Boston Public School Events:**

- **Boston Public Schools Beethoven School Family Health Fair:** This community health event held at the Beethoven School in West Roxbury brought families together to learn about a variety of health topics and engage in fun-filled family activities. Global and

Population Health faculty and staff distributed educational materials and talked with parents about GSDM's Smart Smiles School-based Oral Health Program. Oral health promotion activities included a demonstration of proper tooth brushing techniques. Goodie bags with oral hygiene supplies, pencils, and stickers were given out at the end of the program.

- **Open House Events** held at Holmes, Clap, Hurley, Winthrop, Henderson Upper, Perkins, and Everett Schools: GPH promoted the Smart Smiles School-based Oral Health Program and emphasized the importance of good oral health at each of these schools' back to school event. Hundreds of families were in attendance at these open houses, which featured a wide variety of community-based organizations presenting information of interest to families with grade school children.
- **JF Kennedy Family Wellness Event:** The JF Kennedy Wellness Night featured numerous organizations with health and wellness displays and educational discussions and handouts. GSDM staff set up a table with toothbrushes, toothpaste, and tooth models for children to practice their brushing techniques. Tips for maintaining good oral health were presented to each attendee. Over 150 parents and children benefitted from the oral health materials and presentation.
- **John Winthrop School's Family Night:** John Winthrop School's Health & Wellness Committee utilized a raffle system to encourage the 40 families in attendance to visit each of the healthy living workshops. Families were allowed to participate in the raffle after they had received stamps, marks or stickers at every workshop, ensuring that all in attendance received the full benefit of each fun and informative station. The workshops included Healthy Snacks, Oral Health, Gardening Tips, Recycling and Exercise.

**Brazilian Independence Day Outdoor Festival:** GSDM volunteers participated in the annual Brazilian Independence Day Festival which brings area residents together to experience Brazilian culture, history, and heritage. The event included children's activities, musical performances, authentic Brazilian cuisine, and educational opportunities. Many health-related organizations were on site to offer various health screenings for attendees. Fourteen GSDM faculty and students provided 20 dental screenings and saw dozens more attendees, promoting oral health and handing out educational brochures, toothbrushes, and toothpaste. The GSDM volunteers worked alongside volunteers from the Massachusetts

Alliance of Portuguese Speakers (MAPS), who offered free HIV and Hepatitis C screenings.

**Charles Yancey Book Fair and MY CHIP (Child ID Program) Event:** Six members of the GSDM community donated their time to the 29<sup>th</sup> Annual Charles C. Yancey Book Fair. This annual well-organized event held at the Reggie Lewis Track and Athletic Center promotes literacy and encourages the love of reading among Boston youth. More than 100 families were in attendance. Some of the GSDM faculty and students obtained bite registrations and DNA samples for the Child Identification Program, MY CHIP, while others were stationed at a dental resource table to promote oral health to school-aged children and their families.

**Chelsea Community Events:**

- **Open House for Berkowitz and Hooks Elementary Schools:** Global and Population Health faculty introduced the Chelsea School-based Oral Health Program to 200 parents of first graders in attendance at these two open house events. They presented the importance of preventive oral care by showing parents pictures of sealants and fluoride varnish and explaining how and why these are used to protect children's teeth. An emphasis was placed on the importance of follow up care with a dentist when dental treatment is needed.
- **Chelsea Back to School Celebration:** Two thousand students and parents attended the annual Chelsea Back to School Celebration held at Williams Middle School in Chelsea. Forty school and community groups welcomed students back to school with games, prizes, giveaways, and resource information. Four GSDM staff members were on hand to talk with guests about oral health, GSDM's School-based Oral Health Program, and the Chelsea School Dental Center.
- **MGH Chelsea Summer Safety Fair:** The MGH Chelsea Health Center offered its 19<sup>th</sup> Annual Summer Safety Fair in June. GPH's Oral Health School-based Program faculty and staff provided oral health education, promoted the use of mouth guards when playing sports, and distributed toothbrushes and toothpaste to about 300 individuals. Volunteers passed out flyers and reminded the community that the Chelsea School Dental Center is available for all Chelsea Public School students. They also helped the Masons obtain bite registrations and DNA samples for their Child Identification Program.

**Christmas in the City (CITC):** GSDM faculty, students, and staff joined thousands of volunteers at the 23rd annual Christmas in the City. Held at the Boston Convention & Exhibition Center, this festive event benefited 3800 homeless children, parents, and caregivers from Boston area homeless shelters. The holiday party featured a banquet, live entertainment, a “Winter Wonderland” with games, rides, a petting zoo, and other kid-friendly activities. This marks the fourth year that GSDM participated in CITC. Faculty and students offered dental screenings and helped address oral issues pertaining to individual children. They also promoted oral health by providing age-appropriate, hands-on activities and distributed toothbrushes and information on proper oral hygiene.

**Countdown to Kindergarten Boston:** Twenty-seven members of the GSDM community volunteered their time at the 16<sup>th</sup> Annual Countdown to Kindergarten Celebration, held at the Boston Children’s Museum. Countdown to Kindergarten Boston is a non-profit collaborative that offers resources and events throughout the year to celebrate and support the transition into kindergarten. This was GSDM’s twelfth year participating in the event. Volunteers provided dental screenings and led oral health activities for parents and kids in attendance, including instructing the children on brushing techniques and teaching about oral health through arts and crafts. Parents also had the opportunity to talk to the volunteers and ask questions while their children were learning. The evening was a huge success for both Countdown to Kindergarten and GSDM. After three hours, GSDM volunteers had performed 90 dental screenings and interacted with hundreds of families.

**Cradles to Crayons Outreach:** Members of the GSDM community volunteered with the nonprofit Cradles to Crayons at the organization’s headquarters in Brighton. The volunteers received an introduction to Cradles to Crayons before being assigned to project areas where they worked with a Cradles to Crayons staff member on projects that would benefit the organization’s various programs. Cradles to Crayons provides children from birth through age 12 living in homeless or low-income situations with the essential items they need to thrive, connecting communities that have items with communities that need them.

**East Boston Kiwanis Bicycle Safety Rodeo:** GSDM faculty and staff served at the annual East Boston Bicycle Safety Rodeo at the Salesian Boys and Girls Club. Approximately 300 families attended this fun and educational event. Children received free bicycle safety checks while local organizations distributed information about their services. GSDM provided resource materials about the importance of oral health and the

use of mouth guards, and goodie bags were given to all who visited the table.

**Father's Family Fun Day:** Six GSDM volunteers served at the Boston Public Health Commission's two Father's Family Fun Days, which took place at Harambee Park in Dorchester in the fall of 2015 and the summer of 2016. The purpose of these events was to highlight the importance of fatherhood by attempting to identify, engage, and support fathers' relationships with their children. GSDM volunteers conducted dental screenings, provided oral health information, promoted positive oral health habits, and provided interactive age appropriate activities to all family fun day attendees.

**Greater Boston Food Bank (GBFB) Sorting Events:** During five days in April, GSDM staff and faculty met at the GBFB to sort, pack, and inspect food and groceries for people in need. The GBFB is the largest hunger relief organization in New England and among the largest food banks in the United States.

**Haley House Events:** On fourteen separate occasions during BU's Global Days of Service and twice during student orientation, GSDM students served at Haley House Soup Kitchen in Boston. Haley House is dedicated to helping those made vulnerable by the harshest effects of inequality move toward wholeness and economic independence.

**Healing Our Community Collaborative (HOCC):** HOCC is a non-profit organization for women infected with, affected by, or at risk for HIV/AIDS. Through ongoing HIV health education and prevention programming, HOCC strives to help eliminate health disparities among women without access to optimal health care.

- **Healing Our Community Collaborative Health Fair:** GSDM students celebrated National Women's Checkup Day by participating in the Healing Our Community Collaborative 6<sup>th</sup> Annual Health Fair. The HOCC Health Fair was an opportunity for volunteers to meet with women and encourage regular checkups in order to improve their overall health and help lower the risk of health conditions through early detection of heart disease, diabetes, Hepatitis-C, cancer, mental health illnesses, sexually transmitted infections, HIV infection, and other conditions. GSDM students provided oral health education to women by showing proper brushing techniques and providing information about oral care. Over 100 women participated in the

event, which was held at the Old South Church on Boylston Street in Boston.

- **Healing Our Community Collaborative Women, Oral Health, and HIV Connection:** The GSDM community volunteered at the *Women, Oral Health, and HIV Connection* event sponsored by Healing Our Community Collaborative. The volunteer event, a collaborative effort between the GSDM Student Chapter of the American Association of Public Health Dentistry and the Boston Public Health Commission HIV Dental Program, attracted 80 at-risk women from the community. The women in attendance participated in oral health discussions and many received screenings from the GSDM volunteers.

**Healthy Baby/Healthy Child (HB/HC) Summer Camp Picnic:** The Healthy Baby/Healthy Child Program is an innovative home-visiting program whose mission is to promote the health and wellbeing of women, children, and families in Boston, particularly those living in communities that are disproportionately impacted by infant mortality and other health disparities. Each year GPH participates in the Boston Public Health Commission's HB/HC summer camp picnic activities, and this year three GSDM students joined GPH faculty at Stony Brook Reservation in Hyde Park to promote oral health, offer fun interactive children's activities, provide dental screenings, and hand out free toothbrushes and toothpaste to families in attendance.

**HIV Dental Care/Ryan White Program:** Through support from the Ryan White Care Act, GSDM provides treatment to patients with HIV and AIDS throughout New England. A network for education referral has been established and includes Cambridge Cares about AIDS, Boston University Medical Center, and the AIDS Support Group of Cape Cod.

**Lawrence Community Events:**

- **Frost Middle School Healthy Living Expo:** The City of Lawrence held its *Healthy Living Expo* at the Frost Middle School. Over 25 organizations were at the school to promote a healthy lifestyle to the Lawrence community. GSDM's interactive activities included puppet shows, games, and educational materials teaching the importance of proper oral hygiene, a healthy diet, regularly scheduled dental visits, preventive measures for tooth decay, dental sealants, healthy eating, periodontal disease, and tobacco cessation.

- **Lawrence Community Resource Fair – Fiesta de Salud:** The Greater Lawrence Community Action Council held a community resource fair for the families of the Greater Lawrence area. The purpose of the fair was to educate residents about the various resources available in the Lawrence community to help put families on the road to success. GSDM’s faculty and staff were on hand to talk with participants about oral health, healthy eating, and oral hygiene and to discuss the work of Global and Population Health’s school-based Oral Health Program in Lawrence. About 500 families participated in this highly successful event.

**Leventhal-Sidman Jewish Community Center (JCC) Wellness Expo:** GSDM members participated in the JCC Wellness Expo in Newton, which provided wellness and fitness activities for the whole family, including everything from expert running advice to a make-your-own-smoothie station. The Alpha Omega-sponsored GSDM table was staffed by students, faculty, and alumni. Volunteers handed out toothbrushes and toothpaste and provided oral hygiene instructions to visitors. Oral health promotion posters were displayed, and coloring books and brochures about a child’s first visit to the dentist were distributed.

**Massachusetts Stand Down:** Massachusetts Stand Down, co-sponsored by Volunteers of America and the Department of Veterans Affairs, is a community program designed to help homeless and at-risk veterans. Held toward the end of August, the annual daylong event gives veterans in need a chance to receive food, shelter, clothing, health services, and more. This year the event was held at the International Brotherhood of Electrical Workers (IBEW) 103 in Dorchester. Thirty-four GSDM volunteers eagerly offered assistance to more than 500 veterans in attendance, providing 87 dental screenings, denture cleaning and labeling, dental hygiene supplies, and educational materials.

**MassCARE Health and Fitness Fair:** Members of the GSDM community volunteered at the MassCARE Health and Fitness Fair at the Cedardale Center in Groveland, Massachusetts. The Health and Fitness Fair serves HIV positive women, children, youth, and their families with a day of fun activities, as well as health and wellness screenings and information. Sixteen GSDM student and faculty volunteers spent the day giving 22 dental screenings and a presentation on oral health to 100 guests at the fair. Attendees stopped by the GSDM booth to pick up health and wellness information and pamphlets promoting oral health. Children enjoyed dental-related activities and games.

**Mattapan Health Revival:** Twenty-one members of the GSDM community volunteered at the Mattapan Health Revival held at the Mattapan Health Center in Hyde Park. The mission of this event is to improve the quality of life for residents of Mattapan and surrounding communities by providing health care services. Through a collaborative effort between the Office of Global & Population Health and the Boston University chapter of the National Student Dental Association, volunteers provided 55 dental screenings for adults and children. Faculty and students interacted with and provided oral health information to people from the community in the GSDM main tent and in the children's areas.

**Moon Festival:** GSDM's Asian Dental Student Organization (ADSO) and Global & Population Health faculty participated in the Mid-Autumn Moon Festival at Townfield Park in Dorchester. Over 100 members of Chinese and Vietnamese communities attended the free festival and enjoyed food tastings, lion dances, lantern decorating, raffles, and other activities. ADSO members were on site to promote oral health.

**Oral Cancer Foundation Walk for Awareness of Boston:** The Oral Cancer Foundation organized its 9<sup>th</sup> annual walk to raise awareness for oral cancer. Twenty-six GSDM volunteers signed up for the walk and countless others joined in the walk on the day it was held. The GSDM team was coordinated by the BU chapter of the American Student Dental Association and the faculty and staff participating in the event were members of the Oral Cancer Research Initiative, a focused multidisciplinary collaborative that works on diverse issues related to cancer.

**Pine Street Inn Learn and Serve:** During GSDM orientation, several students participated in Learn and Serve at the Pine Street Inn, a half-day opportunity that combined hands-on service with an educational tour of the Inn to provide volunteers with a deeper understanding of the issues of homelessness, poverty, and Boston's lack of affordable housing. Boston University volunteers worked in the kitchen to assist in preparing some of the more than 2000 meals prepared at the Pine Street Inn each day.

**Project Hope:** Project Hope is a multi-service agency in Boston providing low-income women with children access to education, jobs, housing, and emergency services.

- **Project Hope School Readiness Resource Fair:** This resource fair for families with children 0-5 years is part of the year-round Countdown to Kindergarten/Boston Children's Museum events that take place in

various Boston neighborhoods. GSDM promotes oral health as it relates to young children and parents/caregivers with age appropriate and interactive activities.

- **Project Hope Childcare Staff Training:** GSDM faculty led two interactive workshops, one with Project Hope staff and one with parents, on oral health issues specific to preschool children.
- **Project Hope Shelter Oral Health Promotion:** A GPH faculty member discussed oral health recommendations with women living in the Project Hope Shelter and gave out educational materials and oral hygiene supplies.

**Puerto Rican Festival:** This three day outdoor event held at Boston's City Hall Plaza is dedicated to Puerto Rican families. Over 100 adults and families in attendance enjoyed a day of entertainment and received up to date information on various health topics and community resources. GSDM's chapter of the Massachusetts Student Hispanic Dental Association alongside dental students from Tufts and Harvard University as well as members of the Massachusetts Hispanic Dental Association promoted oral health and gave out free toothbrushes and toothpaste.

**Raising a Reader Family Fun Day:** GSDM participated in the Boston Public Library's Raising a Reader Family Fun Day to promote oral health through dental arts and crafts. Raising a Reader is a non-profit with an early literacy dual intervention program. The organization offered a series of Family Fun Days in several of the Boston Public Library branches including this dinosaur-themed event at the Upham's Corner Branch.

**Research Science Institute:** Since 1994 GSDM has been a participant in the Research Science Institute, a six-week summer program for high school students. Sponsored by the Center for Excellence in Education, in collaboration with the Massachusetts Institute of Technology, the students experience college-level classes and complete hands-on research guided by selected mentors at corporations, universities, and other organizations.

**Relay for Life, Boston University:** The Boston University Relay for Life took place at the Track and Tennis Center on the Charles River Campus on a Saturday in April from 6 p.m. through 6 a.m. Sunday. This is GSDM's eighth year participating in the 12-hour overnight event, where GSDM students, faculty, staff, and friends walk the track to honor cancer survivors, remember people who died of cancer, and raise money for the American Cancer Society.

**Ricesticks and Tea Asian Food Pantry Program:** Ten volunteers from GSDM's Asian Dental Student Organization lent their time to Ricesticks and Tea Asian Food Pantry to help the organization sort and bag food for area residents in need. Ricesticks and Tea Food Pantry is a Boston-based food pantry program that serves more than 120 pre-screened low income Asian immigrant and refugee families each month.

**Rosie's Place:** Located in the South End only a few blocks from GSDM, Rosie's Place describes itself as a sanctuary for women in need of a little extra care and support. It was founded in 1974 with a mission to "provide a safe and nurturing environment that helps poor and homeless women maintain their dignity, seek opportunity, and find security in their lives." Rosie's Place accepts no government funds and relies instead on committed volunteers and private supporters to accomplish its effective and innovative work. GPH collaborates with Rosie's Place in the following events:

- **Franklin Field Health Fair:** GSDM students and faculty participated in the Franklin Field Health Fair, a collaborative event between Rosie's Place and the Boston Housing Authority. The event took place at the Franklin Field Housing Development in Dorchester. Onsite, students provided participants with dental screenings, educated the participants about proper oral hygiene, and handed out oral health information geared to adults, children, the elderly, and disabled.
- **Franklin Field Oral Health Presentations:** An oral health presentation on smoking and oral health was given to residents of the Franklin Field housing development in Dorchester, where Rosie's Place has an office set up to serve the Franklin Field family.
- **Rosie's Place Wellness Fair:** GSDM has a long-standing program that enables women at Rosie's Place to receive oral health information and complementary hygiene supplies. At this year's annual Rosie's Place Wellness Fair, GPH faculty and student volunteers distributed toothbrushes and toothpaste and talked with those attending the fair about the importance of dental health, healthy eating, consequences of tobacco, and other health topics of interest.
- **Women to Women Program:** A GSDM initiative, faculty and students join together each month at Rosie's Place to volunteer their time for women in need. Their efforts are the fruit of a collaboration between the GSDM chapter of the American Association of Women Dentists, the Office of Global and Population Health, and the Wellness Clinic

at Rosie's Place. Volunteers spend the second Friday of every month at Rosie's Place talking with women and answering oral health related questions, as well as offering oral health advice, oral screenings, referrals, and personal oral health products. Over the past twelve months, the students screened 112 women. In addition to serving at-risk women in the South End, the *Women to Women* program contributes to the holistic education of the GSDM student volunteers. It gives them the opportunity to better understand the plight of women in their community and it enables the students to work alongside other healthcare professionals in an interdisciplinary environment.

**Special Olympics Special Smiles® Program:** Students, faculty, and staff of GSDM participated in the Healthy Athletes® Special Smiles® initiative at the Special Olympics Massachusetts Summer Games at Harvard University's Murr Center. Over 1,200 athletes from the Greater Boston area converged on Harvard University's Athletic Complex to participate in athletic events such as bocce, cycling, fishing, golf, sailing, and softball. Dentists and dental students were on hand at the Special Smiles® clinic to offer oral screenings, health education and prevention services, and referrals to athletes who need follow-up care. They also provided individually-fitted mouth guards to participating athletes. The Special Smiles® clinic was staffed by 30 GSDM volunteers who were joined by volunteers from Forsyth School of Dental Hygiene, Harvard University School of Dental Medicine, Massachusetts College of Pharmacy and Health Sciences, Mount Ida College, and Tufts University School of Dental Medicine.

**St. Francis House Cook-Up Care:** GSDM students volunteered their services to prepare and serve food for those in need at St. Francis House, a homeless shelter in Boston. St. Francis House is the largest day shelter in New England and serves more than 800 poor and homeless men and women each day.

**Suffolk University Health and Wellness Fair:** Oral health promotion activities, including screenings, referrals, and education, were provided by GSDM faculty and students at the Suffolk University Health and Wellness Fair. The annual fair is an opportunity for GSDM to provide valuable oral health related information to Suffolk University students, faculty, and staff and allows Suffolk University students to increase their awareness of healthy lifestyle choices, behaviors, and resources within the Boston area.

**Tet in Boston Festival:** GSDM students participated in the annual Tet in Boston Festival, a Vietnamese New Year festival organized by the Vietnamese-American Community of Massachusetts and New England Intercollegiate Vietnamese Student Association. Held at Lombardo's in Randolph, the event drew thousands of people of all ages who enjoyed family-friendly activities, delicious food, and a concert. For more than a decade, GSDM's Asian Dental Student Organization, in partnership with Tufts School of Dental Medicine's Asian Dental Organization, has participated in Tet in Boston. At the dental table, volunteers promoted oral health with kid-friendly activities and handed out oral health education materials.

**Toys for Tots:** GSDM's chapter of the American Student Dental Association (ASDA) made the holidays more joyful for Boston's children in need this past December by collecting and distributing toys for the Toys for Tots Foundation. Organized by the ASDA Community Outreach Committee with help from the ASDA Diversity and Inclusion Committee, students collected new, unwrapped toys for children newborn to age 10.

**Veterans and Military Families Resource Fair:** Held at St. Anthony's Shrine by their new Veterans' Outreach Ministry, this kick-off event was for veterans to gather and learn about services available to them. GSDM students answered oral health questions for veterans and networked with other providers of services.

**Wang YMCA Holiday Party:** GSDM's Asian Dental Student Organization, in collaboration with the Office of Global and Population Health, sustained a holiday tradition by participating in the Wang YMCA Holiday Party in Chinatown prior to the holidays. Students and faculty promoted oral health and served as positive role models for the children who attended this annual holiday celebration. The children enjoyed a bounce house, games, face painting, and other activities. Stations run by GSDM students featured interactive oral health activities along with toothbrush and toothpaste giveaways. For the past eight years, GSDM has participated in this festive event which draws over 400 families from the community.

**Waymark Seventh-Day Adventist Church Community Health and Wellness Fair:** At the Waymark Seventh-day Adventist Church's Health and Wellness Fair, GSDM faculty and students from the Asian Dental Student Organization offered a variety of oral health promotion activities, including dental screenings, to fair attendees. The many families who turned out for the event received a variety of health and wellness

information and free wellness products, including toothbrushes and toothpaste.

**Yankee Dental Congress 41/HIV Dental Work Group:** Students from GSDM volunteered at the HIV Dental Work Group booth at the 2016 Yankee Dental Congress (YDC). They joined students from Boston-area dental and dental hygiene schools as well as staff from GSDM and the Boston Public Health Commission to provide information to visitors about HIV and oral health. This marked the HIV Work Group's 18<sup>th</sup> year of providing an educational exhibit at YDC on HIV/AIDS oral health issues and infection control. Volunteers handed out information packets, talked to visitors, and assisted in collecting consumables to donate to programs for people living with HIV/AIDS in Massachusetts. Many of the GSDM volunteers who helped organize the effort are from the student chapter of the American Association of Public Health Dentistry.

### **International Programs**

**International Elective Externship Program:** GSDM students participated in sixteen international service mission trips in Haiti, Jamaica, Guatemala, Honduras, Mexico, Nicaragua, the Dominican Republic and Panama. The services provided by the fourth year students also provided them an opportunity to make a positive impact on the oral health of the global community while enriching and diversifying their dental education. Because of the efforts of the 43 students who participated in these programs, thousands of individuals across the world have improved oral and overall health.

**International Elective Exchange Program:** GSDM students participated in two exchange programs. Four GSDM students and one faculty member visited three universities in China and another group of four GSDM students and one faculty member visited one university in Japan and one in Thailand. The International Elective Exchange Programs offers students international cultural interests in addition to enhanced clinical training.

- **China,** GSDM students were provided the opportunity to gain additional experience in the evaluation and treatment of patients with head and neck cancer at the Shanghai Jiaotong University School of Stomatology, the Fourth Military Medical University School of Stomatology in Xi'an, and Peking University School of Stomatology in Beijing. All three of these universities have great strength in clinical services for oral cancer patients. They have state-of-the-art inpatient operating facilities, where more than 10,000 major operations on oral

cancers per year and more than 40,000 routine oral surgery operations per year are performed. GSDM has welcomed student and faculty visitors from each of the three schools over the course of this year.

- Japan and Thailand**, GSDM students visited the Tokyo Medical and Dental University (TMDU) in Tokyo, Japan and the Faculty of Dentistry, Chulalongkorn University (FDCU) in Bangkok, Thailand. TMDU has Graduate programs in Medical and Dental Sciences, Health Sciences, Biomedical Sciences, and Biomedical Sciences and has the longest history of dental education and clinical dental services in Japan. TMDU is affiliated with the TMDU Hospital of Dentistry, which is the largest dental care institution in Japan serving over 1,800 outpatients per day, and over 19,000 hospitalized patients per year. FDCU offers postgraduate training for Esthetic Restorative and Implant Dentistry (International), Oral Biology, Oral Pathology, Orthodontics, Prosthodontics, Operative Dentistry, Radiology, Oral and Maxillofacial Surgery, Oral Medicine, Pediatric Dentistry, Community Dentistry, Periodontology, Occlusion, and Dental Biomaterials Science.

**Global APEX:** One GSDM student participated in the Global APEX rotation, which provided the opportunity to integrate and apply classroom learning in Esteli, Nicaragua. While learning from individuals with expertise in health promotion and disease prevention, he helped build capacity within the Esteli community by addressing oral health problems. The student was actively involved in oral health promotion activities, and while working under Dr. Michelle Henshaw's guidance, he developed practical skills in program planning and implementation.

### Grants/Research Activities

**NIDCR Co-PI's: Raul Garcia, Michelle Henshaw 6/01/15-5/31/17**  
 Northeast Center for Research to Reduce Oral Health Disparities \$1,298,989  
 PI of Center Component Project: Michelle Henshaw, *Oral Health Advocates in Public Housing*

**HRSA PI: Michelle Henshaw 7/1/13-6/30/18**  
 Community Based Dental Partnership Program \$1,400,000  
*Salud Oral: Partnership for a Healthier Hampden County*

**NIDCR Co-PI's: Borrelli; Henshaw 9/1/15-8/31/20**  
 \$1,949,315

Attachment A

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# SCOPING DETERMINATION

July 5, 2017

Michael Donovan  
Vice President for Real Estate and Facilities Services  
Boston University  
One Silber Way  
Boston, MA 02215

Re: **Scoping Determination for proposed Boston University Medical Center Institutional Master Plan Amendment, Goldman School of Dental Medicine**

Dear Mr. Donovan:

Please find enclosed the Scoping Determination for the proposed Institutional Master Plan Amendment for the renovation and expansion of the Boston University Goldman School of Dental Medicine building, located at 100 East Newton Street in the South End Neighborhood of Boston. The Scoping Determination describes information required by the Boston Planning & Development Agency in response to the Institutional Master Plan Project Notification Form, which was submitted under Article 80D of the Boston Zoning Code on May 15, 2017. Additional information may be required during the course of the review of the proposals.

If you have any questions regarding the Scoping Determination or the review process, please contact me at (617) 918-4237.

Sincerely,



Michael Rooney  
Project Manager

CC: Brian Golden, BPDA  
Sara Myerson, BPDA  
Jonathan Greeley, BPDA  
Michael Christopher, BPDA  
Samuel Chambers, Mayor's Office of Neighborhood Services



**BOSTON PLANNING & DEVELOPMENT AGENCY**

**SCOPING DETERMINATION**

**FOR**

**BOSTON UNIVERSITY MEDICAL CENTER, INSTITUTIONAL MASTER PLAN AMENDMENT,  
GOLDMAN SCHOOL OF DENTAL MEDICINE**

On May 15, 2017, Boston University Medical Center ("BUMC") submitted to the Boston Planning & Development Agency ("BPDA") an Institutional Master Plan Project Notification Form ("IMPINF") for the purposes of amending the BUMC Institutional Master Plan. The IMPINF consists of the renovation and expansion plan for the Goldman School of Dental Medicine (GSDM). The Project includes a new addition of approximately 41,900 GFA to the existing 84,200 GFA facility, and the renovation of approximately 53,100 GFA of the existing facility, with 31,100 GFA of existing space to remain.

Copies of the IMPINF were made available to the public in both electric and hard copy format. A scoping session was held on June 7, 2017 with public agencies, and a Task Force and community meeting was held on June 8, 2017 at which the Proposed Project, as outlined in the IMPINF was presented. The comment deadline for the IMPINF was June 15, 2017. Comment letters are included in Appendix 1.

The BPDA will review the proposed Institutional Master Plan Amendment ("IMP Amendment") pursuant to Section 80D of the Boston Zoning Code (the "Code"). As part of the BPDA's Article 80 Review, BUMC is required to prepare and submit to the BPDA a proposed IMP Amendment pursuant to Section 80D. The document must set forth in sufficient detail the planning framework of the institution and the cumulative impacts of the project included in the IMP Amendment to allow the BPDA to make a determination about the merits of the proposed IMP Amendment. At other points during the public review of the IMP Amendment, the BPDA and other City agencies may require additional information to assist in the review of the Proposed IMP Amendment.

BUMC will be responsible for preparing and publishing in one or more newspapers of general circulation in the City of Boston a Public Notice of the submission of the IMP Amendment to the BPDA as required by Section 80A-2. This Notice shall be published within five (5) days after the receipt of the IMP Amendment and any other materials.

## SUBMISSION REQUIREMENTS

### FOR

#### BOSTON UNIVERSITY MEDICAL CENTER INSTITUTIONAL MASTER PLAN AMENDMENT

The Scope requests information required by the BPDA for its review of the proposed Boston University Medical Center (BUMC) Institutional Master Plan Amendment (“IMP Amendment”) in connection with the following:

1. Approval of the BUMC IMP Amendment pursuant to Article 80D and other applicable sections of the Boston Zoning Code.
2. Recommendation to the Zoning Board for approval of the BUMC IMP Amendment

The BUMC IMP Amendment should be documented in a report of appropriate dimensions and in presentation materials which support the review and discussion of the IMP Amendment at public meetings. Ten (10) hard copies of the full report should be submitted to the BPDA, in addition to an electronic version in .pdf format. The IMP Amendment should include a copy of this Scoping Determination. The IMP Amendment should also include the following elements.

#### 1. MISSION AND OBJECTIVES

- **Organizational Mission and Objectives.** Describe the BUMC institutional mission and objectives, and describe how this proposed project advances the stated mission and objectives.

#### 2. EXISTING PROPERTY AND USES

The IMP Amendment should present maps, tables, narratives, and site plans, as appropriate, clearly providing the following information:

- **Owned and Leased Properties.** Provide an inventory of land, buildings, and other structures in the City of Boston owned or leased by BUMC as of the date of submission of the IMP Amendment, with the following information for each property that is owned or under agreement:
  - Use(s).
  - Building gross square footage and, when appropriate, number of dormitory beds or parking spaces.
  - Building height in stories and, approximately, in feet, including mechanical penthouses.

#### 3. PROPOSED INSTITUTIONAL PROJECT

- **Article 80D Requirements.** Pursuant to Article 80D, the IMP Amendment should provide the following information for the Proposed Institutional Project:
  - Site location and approximate building footprint.

- Uses (specifying the principal subuses of each land area, building, or structure, such as classroom, laboratory, parking facility).
  - Square feet of gross floor area.
  - Square feet of gross floor area eliminated from existing buildings through demolition of existing facilities.
  - Floor area ratio.
  - Building height in stories and feet, including mechanical penthouses.
  - Parking areas or facilities to be provided in connection with Proposed Projects;
  - Any applicable urban renewal plans, land disposition agreements, or the like.
  - Current zoning of site.
  - Total project cost estimates.
  - Estimated development impact payments.
  - Approximate timetable for development of proposed institutional project, with the estimated month and year of construction start and construction completion for each.
- **Rationale for Proposed Project.** Discuss the rationale for the program of the Proposed Institutional Project in light of earlier discussions on mission, facilities needs, and campus planning objectives.

#### 4. TRANSPORTATION AND PARKING MANAGEMENT

- **Neighborhood Impacts.** Move-in/move-out days at Boston's many institutions of higher learning can be disruptive to neighbors. The IMP Amendment should provide details on how BUMC can mitigate those impacts on the surrounding neighborhood.
- **Loading.** The IMP Amendment should discuss BUMC's loading dock location and programming.
- **Public Notice.** BUMC will be responsible for preparing and publishing in one or more newspapers of general circulation in the City of Boston a Public Notice of the submission of the IMP Amendment to the BPDA as required by Section 80A-2 of the Code. This Notice shall be published within five (5) days after the receipt of the IMP Amendment by the BPDA. In accordance with Article 80, public comments on the IMP Amendment shall be transmitted to the BPDA within sixty (60) days of the publication of this Notice. A sample form of the Public Notice is attached as Appendix 3. Following publication of the Public Notice, BUMC shall submit to the BPDA a copy of the published notice together with the date of publication.
- **Safety.** The IMP Amendment should discuss BUMC's Strategy for keeping students and employees safe while on campus.
- **Sustainability.** The IMP should describe BUMC's past and present sustainability initiatives and future commitment to reducing its environmental impacts.
- **Public Benefits.** The IMP should describe BUMC's public benefits to the City of Boston and its residents.
- **PILOT Payments.** BUMC should initiate a meeting with the Assessing Department to discuss the PILOT program.

**APPENDIX 1**  
**COMMENTS FROM CITY AGENCIES**

## **MEMORANDUM**

TO: Michael Rooney, Project Manager  
FROM: Elizabeth A. Stifel, Senior Architect/Urban Designer  
DATE: June 30, 2017  
SUBJECT: Boston University  
Goldman School of Dental Medicine  
Expanded Project Notification Form

## **BACKGROUND**

After an internal planning process, the Henry M. Goldman School of Dental Medicine (GSDM) has decided that the existing building, dating from 1968 with a 1972 vertical addition, is too small and out of date to meet the needs of the current student and patient population. Strategic redesign and addition has been chosen as the way to provide the facilities needed for contemporary dental treatment and education. The addition forms an L shape to the north and east of the existing GSDM building.

The project requires an amendment to the Boston University Medical Center (BUMC) 2010 Institutional Master Plan (IMP) by adding approximately 41,900 GSF of space to the existing 84,200 GFA building and the renovation of 53,100 GFA of that building. A separate IMP amendment has been filed to address those changes.

In response to these comments, an urban design supplement should be submitted in order to provide enough information to evaluate the project as proposed. Details of submission requirements are outlined in this memorandum.

## **URBAN DESIGN COMPONENT**

The basic approach of reconfiguring the ground floor to make the corner of East Newton and Albany the most prominent location on the building and adding a new patient entrance off of Albany Street are decisions that will help tie the building and school more obviously into the community and the public realm. The complexity of the 4'-0" above grade entrance level is being addressed with a series of granite seating steps and a comfortable ramp that will allow everyone to come to the new entrance porch together. Materially, the proposed precast, brick, wood finish panel, with selective use of glass is reasonably addressing the existing building and its integration with the addition. While

initial material proposals are promising, we anticipate more in depth conversations particularly with regard to context.

Boston Planning and Development Agency (BPDA) design review staff have had several productive meetings with Boston University and its architect. These meetings have focused on understanding the proposed changes to the existing building, how those will work with the addition and building landscape. The meetings have been constructive and BPDA design review staff looks forward to continuing working with the team through design development and construction documents.

Functional elements like the loading dock, compactor, and mechanical penthouse will need continued review to reduce their visual and functional impact on the public. This is particularly important on Albany Street where the new public entrance to the building is now adjacent to multiple support functions like transformers and the loading dock. The relationship of these elements to the sidewalk should incorporate a setback from the sidewalk that will allow a gradual transition from the new stairs and porch down to the sidewalk level. If it is possible to location the transformers in a less public location that would be appropriate. Additionally, look at the orientation of the electrical room areaway and if it could be changed to keep it further from the sidewalk.

As much of the focus has been on the building and the immediate landscape, additional information in the form of renderings from a distance of several blocks up East Newton Street and in both directions along Albany Street should be provided. Additionally, more information on the immediate connection of the building site to the adjacent plaza and parking areas is needed. Other elements for consideration include:

- East Newton Street - The proponent should designate a pickup and drop-off zone on East Newton Street. The proponent should also ensure that street trees on East Newton are protected during construction.
- Albany Street The proponent has proposed moving City-owned traffic signal and signal box. Additional detail should be provided on future location and functionality. The proponent should look at ways to create space where the property line meets the back of the sidewalk. This could be done in a number of ways, looking a introducing more landscaping through relocation or alignment of the service and other non-pedestrian related building support. The focus should be on providing street-level pedestrian enhancements between the existing property line and the building along this busy road approaching the new public entrance to the building. The existing building setback provides a comfortable adjacency to the sidewalk.

Providing space here will also enable the planting of street trees the proponent's property or near the curb, which will in turn enhance the building.

- MBTA Bus Stop - The proponent has proposed moving the MBTA bus stop one block south to the intersection of Stoughton Street and Albany Street. The City supports this concept because it will align the bus stop better with the northbound bus stop and places the bus stop on the far side of the traffic light at East Newton Street. The proponent should consider the following elements:
  - That the new bus stop meets MBTA bus stop standards for lane width and length, ADA accessibility, and other applicable standards. The proponent should provide the City with plan for the new bus stop and a plan for new lane markings between East Newton Street and Stoughton Street.
  - Coordinate with JD Decaux for shelter relocation.
  - Consistent with the City's microHUB strategy, install real time transit arrival information screens to provide an enhanced passenger waiting area experience and bike storage facilities. Proponent should agree to maintain the real time transit infrastructure.

It is anticipated that the Boston Civic Design Commission will begin review of the project with an initial presentation at the July 2017 monthly meeting. Additionally, BPDA and BTD staff will continue working with the proponent on transportation-related matters through the review process.

We reserve the right to add additional concerns during the course of the process of combined BPDA staff and taskforce review.

### **SIGNAGE AND WAYFINDING**

Signage and wayfinding will be addressed during design review of the project. This should focus on the relationship of the GSDM to other buildings in the BUMC complex and to the public realm.

# Boston Groundwater Trust

229 Berkeley St, Fourth Floor, Boston, MA 02116  
617.859.8439 voice  
www.bostongroundwater.org

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Aaron Michlewitz  
Angie Liou

## Executive Director

Christian Simonelli

June 9<sup>th</sup>, 2017

Michael Rooney, Project Manager  
Boston Planning and Development Agency  
One City Hall Square  
Boston, MA 02201-1007

Subject: Boston University Goldman School of Dental Medicine Expanded  
Project Notification Form Comments

Dear Mr. Rooney:

Thank you for the opportunity to comment on the expanded project notification form (EPNF) for the Boston University Goldman School of Dental Medicine. The Boston Groundwater Trust was established by the Boston City Council to monitor groundwater levels in sections of Boston where the integrity of building foundations is threatened by low groundwater levels and to make recommendations for solving the problem. Therefore my comments are limited to groundwater related issues.

The project is located in the Groundwater Conservation Overlay District (GCOD) established under Article 32 of the Zoning Code. As stated in the EPNF and confirmed at the scoping session the project is proposed to be designed and constructed to comply with the requirements of Article 32 to the greatest extent practicable. I look forward to working with the proponent to assure that full compliance is accomplished.

As stated in the EPNF and confirmed at the scoping session compliance with the GCOD requires both the installation of a recharge system and a demonstration that the project cannot cause a reduction in groundwater levels on site or on adjoining lots. As stated in the EPNF and confirmed at the scoping session, the Project will result in no negative impact on groundwater levels to the greatest extent practicable and an engineers' certification report will be submitted to demonstrate that the standards have been met. I look forward to working with the proponent to assure that full compliance is accomplished. The EPNF also states that methods to assure these standards include use of fully waterproofed basement (walls and slab) for the portion of the structure that extends below groundwater levels and the project will have no long term groundwater pumping. In addition the proposed building addition includes one below-grade level. The foundation walls and basement mat slab will be waterproofed and supported on drilled mini-piles that extend into rock. The structure will not cause the groundwater to raise, pond or be lowered in the surrounding area. The Proponent will coordinate with the Boston Groundwater Trust (BGWT) in regard to groundwater monitoring prior to and during construction.

At the scoping session the Proponent also stated that the proposed project will investigate installing porous surfaces along sidewalks, adjacent to their property lines.

I look forward to continuing to work with the proponent and the Agency to assure that this project can have only positive impacts on area groundwater levels.

Very truly yours,

A handwritten signature in cursive script that reads "Christian S. Simonelli".

Christian Simonelli  
Executive Director

CC: Kathleen Pederson, BPDA  
Maura Zlody, BED

RECEIVED

JUN 19 2017

Office of the  
Senior Vice President  
for Operations



**Boston Water and  
Sewer Commission**

980 Harrison Avenue  
Boston, MA 02119-2540  
617-989-7000

June 13, 2017

Mr. Michael Rooney  
Boston Planning & Development  
One City Hall Square  
Boston, MA 02201

Re: Boston University Goldman School of Dental Medicine, PNF

Dear Mr. Rooney:

The Boston Water and Sewer Commission (the "Commission") has reviewed the Expanded Project Notification Form ("PNF") for the proposed renovation and expansion of the Boston University Goldman School of Dental Medicine (the "Project"). The Project site is located at 100 East Newton Street at the intersection of Newton and Albany Streets in Boston's South End neighborhood. The Project includes a new addition of approximately 41,900 Gross Floor Area ("GFA") to the existing 84,200 GFA facility, and the renovation of approximately 53,100 GFA of the existing facility, with 31,100 GFA of existing space to remain. The renovated and expanded building will include office, instructional, clinical, and student collaborative spaces. It will also include support spaces, including mechanical, electrical, telecomm, and storage spaces.

Water, sewer, and storm drain service for the site is provided by the Boston Water and Sewer Commission. There is a 12-inch southern low main on the western side of Albany Street and a 12-inch southern high main on the eastern side of Albany Street. There is a 12-inch southern high main on East Newton Street that connects to the 12-inch southern high main on Albany Street. It is anticipated that the Project will connect to the existing water main in Albany Street for domestic water and fire protection service. Water demand for the Project is estimated at 128,161 gallons per day (gpd).

For sanitary sewer service the Project site is served by a 66-inch x 68-inch combined sewer on Albany Street; a 12-inch sewer main located on East Newton Street which connects to the 66-inch x 68-inch combined sewer on Albany Street; and a 24-inch privately owned combined sewer located northeast of the Project site, which connects to the 66-inch x 68-inch combined sewer on Albany Street. Sewage generation for the Project is estimated at 116,510 gpd, which correlates to a net addition of 1,200 gpd from the existing building. According to the PNF, it is anticipated that the existing sewer services to the existing building will be demolished and a new 12-inch sewer service for the Project will connect to the existing 66-inch x 68-inch combined sewer main on Albany Street.

For drainage the Project site is currently served by a 30-inch x 52-inch storm drain on Albany Street. Also, on East Newton Street there is a 15-inch storm drain that increases to 18-inch storm drain and connects to the 30-inch x 52-inch storm drain on Albany Street.

The Commission has the following comments regarding the proposed Project:

### **General**

1. The Proponent must submit a site plan and General Service Application to the Commission for the proposed Project. The site plan must show the location of the water mains, sewers and drains serving the Project site, as well as the locations of existing and proposed service connections. To assure compliance with the Commission's requirements, the Proponent should submit the site plan and General Service Application to the Commission's Engineering Customer Service Department for review when the design for the Project is at 50 percent complete.
2. Any new or relocated water mains, sewers and storm drains must be designed and constructed at the Proponent's expense. They must be designed and constructed in conformance with the Commission's design standards, Water Distribution System and Sewer Use Regulations, and Requirements for Site Plans.
3. With the site plan the Proponent must provide detailed estimates for water demand (including water required for landscaping), wastewater generation, and stormwater runoff for the Project.
4. It is the Proponent's responsibility to evaluate the capacity of the water and sewer system serving the Project site to determine if the systems are adequate to meet future Project demands. With the site plan, the Proponent must include a detailed capacity analysis for the water and sewer systems serving the Project site, as well as an analysis of the impact the Project will have on the Commission's systems and the MWRA's systems overall. The analysis should identify specific measures that will be implemented to offset the impacts of the anticipated flows on the Commission and MWRA sewer systems.
5. Developers of projects involving disturbances of land of one acre or more are required to obtain an NPDES General Permit for Construction from the Environmental Protection Agency. The Proponent is responsible for determining if such a permit is required and for obtaining the permit. If such a permit is required for the proposed Project, a copy of the Notice of Intent and any pollution prevention plan submitted to EPA pursuant to the permit must be provided to the Commission's Engineering Services Department prior to the commencement of construction.
6. Existing water and drain connections that won't be re-used must be cut and capped in accordance with Commission standards.

### **Sewage/Drainage**

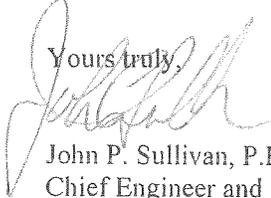
7. The Department of Environmental Protection (DEP), in cooperation with the Massachusetts Water Resources Authority (MWRA) and its member communities are implementing a coordinated approach to flow control in the MWRA regional wastewater system, particularly the removal of extraneous clean water (e.g., infiltration/ inflow ("I/I")) in the system. Pursuant to the policy new developments with design flow exceeding 15,000 gpd of wastewater are subject to the Department of Environmental Protection's regulation 314 CMR 12.00, section 12.04(2)(d). This regulation requires all new sewer connections with design flows exceeding 15,000 gpd to mitigate the impacts of the development by removing four gallons of infiltration and inflow (I/I) for each new gallon of wastewater flow added. The Commission will require the Proponent to develop an inflow reduction plan consistent with the regulation. The 4:1 reduction should be addressed at least 90 days prior to activation of water service, and will be based on the estimated sewage generation provided with the Project site plan.

8. The discharge of dewatering drainage to a sanitary sewer is prohibited by the Commission and the MWRA. The discharge of any dewatering drainage to the storm drainage system requires a Drainage Discharge Permit from the Commission. If the dewatering drainage is contaminated with petroleum products for example, the Proponent will be required to obtain a Remediation General Permit from the EPA for the discharge.
9. The site plan must show in detail how drainage from the building's roof top and from other impervious areas will be managed. Roof runoff and other stormwater runoff must be conveyed separately from sanitary waste at all times.
10. The Project is located within Boston's Groundwater Conservation Overlay District (GCOD). The district is intended to promote the restoration of groundwater levels and reduce the impact of surface runoff. Projects constructed within the GCOD are required to include provisions for retaining stormwater and directing the stormwater towards the groundwater table for recharge. The Proponent must fully investigate methods for infiltrating stormwater on-site before the Commission will consider a request to discharge stormwater to the Commission's system. A feasibility assessment for infiltrating stormwater on-site must be submitted with the site plan for the Project.
11. The Massachusetts Department of Environmental Protection (MassDEP) has established Performance Standards for Stormwater Management. The Standards address stormwater quality, quantity and recharge. In addition to Commission standards, the proposed Project will be required to meet MassDEP's Stormwater Management Standards.
12. In conjunction with the site plan and General Service Application the Proponent will be required to submit a Stormwater Pollution Prevention Plan. The plan must:
  - Specifically identify how the Project will comply with the Department of Environmental Protection's Performance Standards for Stormwater Management both during construction and after construction is complete.
  - Identify specific best management measures for controlling erosion and preventing the discharge of sediment, contaminated stormwater or construction debris to the Commission's drainage system when construction is underway.
  - Include a site map which shows, at a minimum, existing drainage patterns and areas used for storage or treatment of contaminated soils, groundwater or stormwater, and the location of major control or treatment structures to be utilized during construction.
13. The Commission requests that the Proponent install a permanent casting stating: "Don't Dump: Drains to Boston Harbor" next to any new catch basin installed as part of the Project. The Proponent may contact the Commission's Operations Division for information regarding the purchase of the castings.
14. The Commission encourages the Proponent to explore additional opportunities for protecting stormwater quality by minimizing sanding and the use of deicing chemicals, pesticides and fertilizers.

Water

15. The Proponent is required to obtain a Hydrant Permit for use of any hydrant during construction of the Project. The water used from the hydrant must be metered. The Proponent should contact the Commission's Operations Department for information on obtaining a Hydrant Permit.
16. The Commission utilizes a Fixed Radio Meter Reading System to obtain water meter readings. Where a new water meter is needed, the Commission will provide a Meter Transmitter Unit (MTU) and connect the device to the meter. For information regarding the installation of MTUs, the Proponent should contact the Commission's Meter Installation Department.
17. The Proponent should explore opportunities for implementing water conservation measures in addition to those required by the State Plumbing Code. In particular the Proponent should consider indoor and outdoor landscaping which requires minimal use of water to maintain. If the Proponent plans to install in-ground sprinkler systems, the Commission recommends that timers, soil moisture indicators and rainfall sensors be installed. The use of sensor-operated faucets and toilets in common areas of buildings should also be considered.

Thank you for the opportunity to comment on this Project.

Yours truly,  


John P. Sullivan, P.E.  
Chief Engineer and Operations Officer

JPS/as

cc: Gary Nicksa, Boston University  
Marianne Connolly, Mass. Water Resources Authority  
Maura Zlody, Boston Environment Department  
Phil Larocque, Boston Water and Sewer Commission

**APPENDIX 2  
COMMENTS FROM THE PUBLIC**

Boston University Medical Center - Dental School Public Comments via website form 2017-06-16

Date	Name	Address	Organization	Opinion	Comments
6/11/2017	Ken ODonoghue	108 E. Brookline St. #2, Boston, MA 02118		Neutral	<p>I live very close to this project and my concern is with building the foundation system. BUMC said they plan on using a metal sheathing to pour the foundation walls. This process requires a pile driver which will shake the ground. The bow front brick housing on E. Brookline St was built in the late 1800's and their foundations and brick walls could receive some structural damage with the vibrations from driving the piles. In a public meeting they brought up the possibility of using screw piles which are installed like a huge auger and wouldn't have any vibration. The Harrison Albany project is using a slurry system that would be even better here. BUMC tried to give us some assurance saying they were aware and concerned with vibrations to their own buildings HOWEVER their buildings were built in modern times and have a substantially more significant foundation than the brick bow fronts. I am not against the development of this site but I am worried about the construction process and not taking the neighbors concern into account.</p>
6/12/2017	Kit Pyne	108 E. Brookline St. #2, Boston, MA 02118		Neutral	<p>I live a block away on E. Brookline St. I'm concerned about cracking plaster and damage to the foundation. I have been told there are less obtrusive ways to pour the foundation, Harrison /Albany is using a slurry method just for this reason. I used to live on Union Park Street and we could feel the ground shake when they drove piles about 15 years ago.</p>

6/14/2017	Valia Santaniello	108 East Brookline St., Apt 3, Boston, MA 02118		Oppose	<p>I am concerned about the impact of the foundation extension for the dental building, specifically the metal sheathing. The surrounding residential buildings are very old, dating into the early 1900s and the vibrations that will be created could easily cause significant damage to these historical structures. I own and live on E. Brookline Street and am worried about the risk to our building. BU Dental should propose a less invasive and damaging foundation solution.</p>
6/14/2017	Gregory	85 E Brookline Street, Unit 4, Boston, MA 02118	Winter	Oppose	<p>Driving metal sheathing for foundation may have an adverse impact on the structure of my home. I am concerned about the ground vibrations that will be created which may have an adverse effect on my building. These have been shown to produce cracks/damage to older buildings like ours. I would like BU Dental to propose less obtrusive foundation solutions.</p>
6/14/2017	Cinda Stoner	107 East Brookline St., Boston, MA 02118		Support	<p>I am the closest abutter to this project and am extremely concerned about the potential impact that the construction of the dental school extension could have my building's foundation and the building itself. Although I do support the project, I oppose the dental school's foundation construction method---driving metal sheathing around the extended perimeter and any additional method within the foundation area that would require pounding into the soil. In order to avoid as much lateral pressure on our East Brookline St. buildings, the use of slurry walls for the perimeter and the use of screw piles within the foundation area would mitigate this potential hazard. I would like the project to be done with</p>

6/15/2017	Cinda Stoner	107 East Brookline St., Boston, MA 02118		Support	the best interests of all of us. "I sent in my comments on 6/14/2017. Please include section of STAY CONNECTED-GET UPDATES. I missed filling in that section on 6/14. Thank you."
6/15/2017	Jason Loder	85 e Brookline st, unit 1, Boston, MA 02118	85 E Brookline st Condo Association	Neutral	I am concerned with the vibrations caused by laying the foundation walls in the new Dental building. We have had several very expensive repairs and rebuilds over the last 20 years due to BU Medical infrastructure projects. I would like BU Dental to propose less intrusive foundation solutions. This is my home and was built in 1872. Please respect the neighbors, thank you
6/15/2017	Joel Cirkot	85 E. Brookline St. #1, Boston, MA 02118	homeowner	Oppose	I have severe concerns about the approach for this project. The driving of metal sheathing into the ground as a means of building a foundation has the potential to adversely affect the structure of my home, which sits within in a historic district. I strongly request that other, less damaging and vibrational methods of construction be explored.
6/15/2017	Joshua Lakin	108 East Brookline St, Boston, MA 02118	Resident	Oppose	I chose oppose, because although I support many aspects of this project, I don't support the method of driving metal sheathing to extend the foundation. Having lived through the construction of 601 Albany and the Bioresearch facility at the end of East Brookline Street, I can attest to the disruption driving metal sheathing causes to the surrounding buildings. Many buildings on the street adjacent to the construction area are OLD and the vibrations this will cause will

6/15/2017	David Meguerdichian	103 E Brookline St, Apt 4, Boston, MA 02118	103 E Brookline Condo Association	Oppose	<p>have an impact on exterior walls and foundations that haven't been fortified in recent years. I would like this project to propose a less obtrusive foundation solution such as the slurry wall method which will be used at the Albany/Harrison Block project on the other side of our street.</p> <p>"To Whom it May Concern,</p> <p>My name is David Meguerdichian. I am a graduate of Boston University School of Medicine. I also am a Trustee and own a condo at 103 E Brookline St, adjacent to the site of the proposed expansion of BU Dental.</p> <p>I am writing a comment to the BPDA to stress the importance of ensuring the integrity of many of the old, historic row homes near this proposed construction site. As you know, many of these homes, including the one our condo is in, sit on very soft soil, filled in over prior marsh lands/water. As a result, heavy pounding from construction nearby can cause dramatic shifts and alterations to the foundation and structural integrity of these buildings. My neighbors and I worry that this expansion will severely damage our homes if not done properly and directed with care by the BPDA.</p> <p>I am thus requesting on behalf of the owners at 103 E Brookline St that the BPDA direct the project managers of the BU Dental School expansion to refrain from using metal sheathing or piles pounded into the soil in order to prevent lateral stress on our foundations/buildings. From discussing this</p>
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				<p>with my engineering friends, I have come to understand and am advocating for the use of slurry walls (retainer walls) and screw piles as means for creating and developing the foundation for this addition. These techniques will result in far less lateral stress and help preserve our fragile foundations/buildings during this time of construction.</p> <p>Thank you for your time and consideration of our request. We really appreciate your help in preserving the beautiful older buildings in Boston's South End that add so much to the architectural uniqueness of our great city. Please feel free to contact me if I can be of any assistance in reviewing this matter.</p> <p>Sincerely,</p> <p>David Meguerdichian Trustee, 103 E Brookline St Condo Association Owner, Unit #4"</p>
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**APPENDIX 3**  
**TEMPLATE FOR IMP AMENDMENT PUBLIC NOTICE**

**PUBLIC NOTICE**

The Boston Redevelopment Authority (“BRA”), d/b/a/ the Boston Planning & Development Agency (“BPDA”), pursuant to Article 80 of the Boston Zoning Code, hereby gives notice that an Institutional Master Plan Amendment (“IMP Amendment”) was submitted by the NAME OF INSTITUTION, on MONTH, DAY, AND YEAR. The NAME OF INSTITUTION IMP Amendment describes the currently proposed institutional project located at LOCATION OF PROJECT. The IMP Amendment describes the design and impacts of the Proposed Project. DESCRIPTION OF IMP AMENDMENT. Approvals are required of the BPDA pursuant Article 80 for the issuance of an Adequacy Determination / Preliminary Adequacy Determination by the Director of the BPDA for the approval of the IMP Amendment.

The IMP Amendment may be reviewed at the Office of the Secretary of the BPDA, Boston City Hall, Boston, Massachusetts 02210 between 9:00 a.m. and 5:00 p.m., Monday through Friday, except legal holidays.

Public comments on the IMP Amendment, including comments of public agencies, should be submitted to Mr. Michael Rooney, Project Manager, BPDA, at the address stated above or by email at Michael.Rooney@Boston.gov within sixty (60) days of this notice or by \_\_\_\_\_, 2017.

**BOSTON REDEVELOPMENT AUTHORITY**  
**D/B/A BOSTON PLANNIGN & DEVELOPMENT AGENCY**

Teresa Polhemus, Secretary