

Institutional Master Plan

Children's Hospital Boston

January 31, 2008

Revised: April 22, 2008



Submitted to:

Boston Redevelopment Authority
One City Hall Square
Boston, Massachusetts 02201

Submitted by:

Children's Hospital Boston
300 Longwood Avenue
Boston, Massachusetts 02115

Prepared by:

Epsilon Associates, Inc.
3 Clock Tower Place, Suite 250
Maynard, Massachusetts 01754

In Association with:

Elkus/Manfredi Architects
Goulston & Storrs
Shepley Bulfinch Richardson & Abbott
Vanasse Hangen Brustlin

Submitted pursuant to Article 80 of the Boston Zoning Code



Children's Hospital Boston

Epsilon
ASSOCIATES INC.

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1.0 INTRODUCTION/MISSION AND GOALS

1.1 Introduction

Children's Hospital Boston (Children's) is the nation's premier pediatric medical center with a commitment to being a worldwide leader in the advancement of children's health. Founded in 1869 as a 20-bed hospital for children, the hospital has grown significantly and has a legacy of firsts that have improved the practice of pediatric care across the world. Children's is a 397-bed¹ comprehensive center for pediatric and adolescent health care with a four part mission to: 1) provide the most advanced clinical care, 2) advance care through scientific discovery, 3) train the next generation of leaders in the field, and 4) promote the health of children and families in nearby communities. Children's was recently awarded Magnet status, an exclusive designation developed by the American Nurses Credentialing Center to recognize health care organizations that exemplify nursing excellence. Only five percent of hospitals worldwide have achieved Magnet status; Children's is now the first exclusively pediatric hospital in New England to receive the distinction.

The hospital's main campus is located within the Longwood Medical and Academic Area (LMA) of Boston; additional patient care facilities are located throughout the Eastern Massachusetts, including at the hospital's newest facility in Waltham.

In 2005 and 2006, Children's conducted a strategic planning initiative to identify its long-range goals and facility needs. One of the principal goals of the hospital's strategic plan is to allow on-campus growth to focus on acute care and related research and education, while moving less acute care and administrative functions off-campus, to the extent practicable. This will better serve patients in Boston and surrounding suburbs by allowing the LMA campus to be the tertiary and quaternary hub for the system in addition to the community hospital to the children of Boston. This will allow more routine care to be delivered at more convenient locations in the suburbs.

The strategic plan has identified an urgent need for new inpatient beds to serve its growing acute care patient population. In addition, the hospital identified the need for several LMA campus development and improvement projects over the next 10 years to provide sufficient clinical, research and hospital support space to meet Children's mission. To fulfill these needs, Children's is proposing a vertical addition to its Main Building with 39 net new inpatient beds (the Project or Main Building Expansion). The Main Building Expansion is proposed to meet the urgent need for acute care beds. In the longer term, Children's is anticipating the construction of a Patient Care Center to respond to further need for

¹ Children's Hospital Boston will have a total of 397 beds by Spring 2008. This includes 11 beds located in Waltham and beds added to the Main Campus through campus renovations and upgrades. With the proposed Main Building Expansion, Children's will have a total of 436 beds.

inpatient beds, clinical, and support spaces. Children's may also pursue the development of 819 Beacon Street during the term of the Institutional Master Plan (IMP). As the Patient Care Center (PCC) and the 819 Beacon Street program and schedule become more fully defined, they will be addressed in an Amendment to the IMP.

Children's is pleased to submit this Institutional Master Plan (IMP) pursuant to Article 80D of the Boston Zoning Code and the Boston Redevelopment Authority (BRA) Scoping Determination dated April 17, 2007, as modified December 26, 2007 (see Appendix A). Children's is submitting this 10-year Institutional Master Plan (through 2018) that will allow the hospital to pursue its vision of being a worldwide leader in pediatric healthcare and will ensure that Boston and Massachusetts residents will have full access to that care.

The IMP includes the following chapters:

- ◆ Introduction/Mission and Goals;
- ◆ Existing Campus and Context;
- ◆ Institutional Master Plan / Future Needs;
- ◆ Proposed Project;
- ◆ Transportation Component;
- ◆ Infrastructure Systems;
- ◆ Community Benefits; and
- ◆ Consistency with LMA Interim Guidelines.

A Draft Project Impact Report (DPIR) for the proposed project contained in this IMP is being submitted simultaneously with this IMP to satisfy the requirements of Article 80B, Large Project Review, of the Boston Zoning Code.

1.2 Description of Children's Hospital Boston

Children's has been a leader in child health for more than 130 years. The hospital opened as a 20-bed facility at 9 Rutland Street in Boston's South End in 1869, and sixty-nine patients were treated during the first year. Shortly afterward, the hospital embarked on planning for a new facility, which opened in 1882 on Huntington Avenue with 60 beds and eventually expanded to approximately 100 beds. In 1903, Children's formalized its ties with Harvard Medical School and became a teaching hospital. The hospital established its current main campus adjacent to the medical school beginning in 1912 with the construction of the Administration Building (now known as the Hunnewell Building) at

300 Longwood Avenue and several connected patient wards. The new campus was fully occupied by 1914.

Throughout its history Children’s physicians have been at the forefront of pediatric care. In 1922, Dr. James L. Gamble developed a methodology for intravenous feeding that saved the lives of thousands of infants at risk of dehydration from diarrhea. In 1930, the Polio Rehabilitation and Neurology clinics were created and, with Harvard Medical School, the Cardiac and Infantile Paralysis clinics were established. In 1949, as previously noted, Dr. John F. Enders and his colleagues successfully cultured the polio virus, for which they received the Nobel Prize in 1954. Countless other medical and research breakthroughs are attributed to Children’s Hospital and its physicians. Some of these “firsts” are listed on the below.

The hospital’s physical plant has grown incrementally with its expanding role as the nation’s premier pediatric care center. Following the initial opening of the campus in 1914, hospital buildings were added in 1930 (Bader), 1956 (Farley), 1967 (Fegan), 1971 (Enders), 1973 (Pavilion), 1988 (Main), and 1990 (Enders Expansion). In 1995, the Patient and Family Parking Garage was constructed, and in 2003 the largest single addition to the campus was constructed, the Karp Family Research Laboratories. Most recently, in Spring 2005, the hospital opened its newest clinical building, Main South.

| Historic Milestones at Children’s Hospital Boston | |
|--|--|
| 1891 | Children's establishes the nation's first laboratory for the modification and production of bacteria-free milk. |
| 1920 | Dr. William Ladd devises procedures for correcting various congenital defects such as intestinal malformations, launching the specialty of pediatric surgery. |
| 1922 | Dr. James Gamble analyzes the composition of body fluids and develops a method for intravenous feeding that saves the lives of thousands of infants at risk of dehydration from diarrhea. |
| 1932 | Dr. Louis Diamond identifies Rh disease, in which a fetus's blood is incompatible with its mother's. The mother produces antibodies against her child's blood, which damage the red blood cells and cause severe anemia, heart failure and brain damage. Diamond later develops a transfusion procedure that replaces the blood of a newborn affected by Rh disease. |
| 1938 | Dr. Robert Gross performs the world's first successful surgical procedure to correct a congenital cardiovascular defect, ushering in the era of modern pediatric cardiac surgery. |
| 1947 | Dr. Sidney Farber achieves the world's first successful remission of acute leukemia. |
| 1954 | Dr. John Enders and his colleagues win the Nobel Prize for successfully culturing the polio virus in 1949, making possible the development of the Salk and Sabin vaccines. Enders and his team went on to culture the measles virus. |
| 1969 | The New England Regional Infant Cardiac Program is established with Children's as its headquarters, providing advanced care for infants with congenital heart disease. |

| Historic Milestones at Children’s Hospital Boston (Continued) | |
|--|--|
| 1971 | Dr. Judah Folkman publishes "Tumor angiogenesis: therapeutic implications" in the New England Journal of Medicine. It is the first paper to describe Folkman's theory that tumors recruit new blood vessels in order to grow. |
| 1978 | Children's researchers develop genetic tests to diagnose thalassemia, a serious inherited blood disorder, in unborn children. A similar technique led to the development of prenatal tests for sickle cell anemia in 1982. |
| 1983 | Children's physicians report the first surgical correction of hypoplastic left heart syndrome, a defect in which an infant is born without a left ventricle. The procedure is the first to correct what previously had been a fatal condition. |
| 1985 | The Howard Hughes Medical Institute commits \$17 million to help fund a major research program in molecular genetics. |
| 1986 | Children's surgeons perform the hospital's first heart transplant. Later in the year, a 15-month-old patient becomes the youngest person in New England to receive a heart transplant. |
| 1986 | Dr. Louis Kunkel and research team identify the gene on the X-chromosome responsible for Duchenne muscular dystrophy. In 1987, Kunkel and Dr. Eric Hoffman identify protein missing in patients with the disease, called dystrophin. |
| 1987 | The gene for a brain protein found in the degenerative nerve tissue of Alzheimer's patients is isolated and located on chromosome 21 by Dr. Rachael Neve. |
| 1989 | Researchers in Neurology and Genetics discover that beta amyloid, a protein that accumulates in the brains of people with Alzheimer's disease, is toxic to neurons, indicating the possible cause of the degenerative disease. |
| 1990 | Dr. Joseph Murray, chief of Plastic Surgery emeritus, wins Nobel Prize for his pioneering work in organ transplantation. |
| 1993 | A team led by Dr. Carlo Brugnara discovers that a common antifungal medication, clotrimazole, prevents dehydration in red blood cells, a factor in sickle cell disease. A related compound is now entering Phase III clinical trials in adults with sickle cell disease. |
| 1997 | Endostatin, one of the most potent inhibitors of angiogenesis, is discovered by Drs. Michael O'Reilly and Judah Folkman. In mice, endostatin has shown promise in slowing some cancers to a dormant state. Phase I clinical trials began in 1999. |
| 1998 | Dr. Anthony Atala successfully transplants laboratory-grown bladders into dogs, a major advance in tissue engineering. |
| 1998 | Dr. Evan Snyder clones the first neural stem cells from the human central nervous system, offering the possibility of cell replacement and gene therapies for patients with neurodegenerative disease, neural injury or paralysis. |
| 1999 | The FDA approves the use of CardioSEAL, a minimally invasive device invented by Dr. James Lock that closes holes in the hearts of the most seriously ill cardiac patients. |

| Historic Milestones at Children's Hospital Boston (Continued) | |
|--|---|
| 1999 | Children's establishes its Advanced Fetal Care Center to provide diagnostic services, genetic and obstetrical counseling, and prenatal or immediate postpartum intervention for fetuses with complex birth defects. |
| 1999 | Dr. Larry Benowitz grows nerve cells in the damaged spinal cords of rats, a significant step in the treatment of spinal cord injuries. The next year, Benowitz discovers inosine, an important molecule in controlling axon regeneration in nerve cells. |
| 2000 | Children's performs its 100th heart transplant. |
| 2000 | Dr. Frederick Alt finds that end-joining proteins maintain the stability of DNA, helping to prevent the kinds of chromosomal changes that precede cancer. |
| 2000 | Children's Hospital Trust launches <i>Cause for Wonder</i> , a 5-year, \$300 million capital campaign, largest in hospital history. |
| 2001 | Children's performs the world's first successful fetal repair of hypoplastic left heart syndrome in a 19-week-old fetus. |
| 2001 | Ophthalmologist Dr. Lois Smith demonstrates that insulin-like growth factor 1 is critical to blood vessel growth in the eye and that its loss in premature babies may lead them to develop retinopathy of prematurity. A Phase I clinical trial is now examining whether supplementing IGF-I in premature newborns will prevent the condition. |
| 2002 | Children's is recognized by the National Association of Children's Hospitals and the American Academy of Pediatrics as a national model in terrorism preparedness. |
| 2002 | Drs. Scott Pomeroy and Todd Golub use microarray gene expression profiling to identify different types of brain tumors and predict clinical outcome. This allows radiation and chemotherapy to be tailored to kill cancer cells while leaving healthy tissue alone. |
| 2002 | Dr. Nader Rifai co-authors a landmark study showing that a simple and inexpensive blood test for C-reactive protein, a substance produced in the liver when arteries become inflamed, is a more powerful predictor of a person's risk of heart attack or stroke than LDL cholesterol. |
| 2003 | The Karp Family Research Laboratories open at Children's, increasing the hospital's research space by more than 60 percent. |
| 2003 | Drs. Heung Bae Kim and Tom Jaksic develop, test and successfully perform the world's first-ever serial transverse enteroplasty (STEP) procedure, a potential lifesaver for patients with short bowel syndrome. |
| 2003 | Dr. George Daley and colleagues report creating a continuously growing line of embryonic germ cells, primitive cells that mature to become sperm or eggs. They also created male reproductive cells capable of fertilizing an egg to form an early embryo. These achievements may lead to a better understanding how reproductive cells form, and ways of "reprogramming" specialized cells to become more like embryonic stem cells. |
| 2004 | Children's surgeons perform New England's first multi-visceral organ transplant when 11-month-old Abdullah Alazemi receives a stomach, pancreas, liver and small intestine from a single donor. |

| Historic Milestones at Children’s Hospital Boston (Continued) | |
|--|---|
| 2004 | Drs. Marsha Moses, Roopali Roy and colleagues show that an enzyme called ADAM 12, when found in urine, is a reliable indicator of the presence of breast cancer. Such "biomarkers" may indicate that a dormant, harmless tumor is about to begin growing and spreading, and could be used for screening patients and for guiding therapy. |
| 2005 | Dr. Stephen Harrison and colleagues show how a key part of the human immunodeficiency virus (HIV) changes shape, triggering other changes that allow the AIDS virus to enter and infect cells. The findings offer clues that could lead to new vaccine and treatment approaches. |
| 2005 | In the best-documented effort to date, Dr. Felix Engel, PhD, and Mark Keating, MD, successfully get adult heart-muscle cells to divide and multiply in mammals, the first step in regenerating heart tissue. They are now investigating whether their technique can improve heart function in animal models of cardiac injury. |
| 2006 | Dr. Michael Greenberg and colleagues demonstrate that newly-recognized genetic elements called microRNAs, which suppress gene activity, have a role in the developing nervous system. They show that one microRNA fine-tunes the development of synapses, the points of communication between brain cells that underlie learning and memory. |
| 2006 | Children's opens a state-of-the-art Proteomics Center, enabling researchers and clinicians to conduct large-scale, systematic studies of proteins and protein actions and interactions in the body. |
| 2006 | Drs. Dale Umetsu, Omid Akbari and colleagues report that a newly recognized type of immune cell, NKT, may play an important role in causing asthma, even in the absence of conventional T-helper cells. Moreover, NKT cells respond to a different class of antigens than are currently recognized to trigger asthma. |
| 2006 | A report in <i>The Lancet</i> describes good outcomes in seven children with spina bifida who received laboratory-grown bladders, the first complete tissue-engineered organs to be implanted in human patients. |
| 2006 | Dr. Larry Benowitz and colleagues discover a naturally occurring growth factor called oncomodulin that stimulates regeneration in injured optic nerves, raising the possibility of treating blindness due to optic-nerve damage and the hope of achieving similar regeneration in the spinal cord and brain. |
| 2006 | The American Institute of Architects (AIA) awarded the Children’s new Clinical Building Expansion (Main South) an award of excellence. |
| 2006 | As an integral part of the new clinical building expansion, Children’s created the world’s first intraoperative Magnetic Resonance Imaging (MRI) operating room of its kind. |
| 2007 | Cardiac surgeons Drs. Virna Sales and John Mayer create living, growing heart valves using tissue engineering techniques in an animal model. Their work raises the possibility that children with congenital heart disease could receive replacement valves and other heart structures that grow with them, eliminating the need for repeat operations. |
| 2007 | Researchers led by Dr. Bernhard Kuhn demonstrate a way to get injured heart tissue to regrow and regain pumping ability. In an animal model, Kuhn and colleagues used a naturally-occurring compound called periostin to stimulate growth pathways that are normally switched off in heart cells after embryonic development. |

| Historic Milestones at Children’s Hospital Boston (Continued) | |
|--|---|
| 2007 | Dr. Morris White and colleagues show that reducing insulin signaling specifically in the brain can prolong lifespan in mammals, providing a molecular explanation for the value of exercise and eating in moderation. Mice whose insulin signaling was reduced only in the brain lived longer and were more active in old age, retaining youthful metabolic cycles and protective levels of anti-oxidant enzymes. |
| 2007 | Dr. Lois Smith and colleagues show that increasing intake of omega-3 fatty acids, found in popular fish-oil supplements, may protect against blindness resulting from abnormal blood vessel growth in the eye. In an animal model of retinopathy, a mere 2 percent change in dietary omega-3 intake was sufficient to decrease disease severity by 50 percent. |
| 2007 | High-volume drug screening in zebrafish reveals a new way to increase stem cells in blood, suggesting a possible treatment to help patients recover immune function more quickly after chemotherapy or bone marrow transplant. Dr. Leonard Zon and colleagues show that a stable analog of prostaglandin can enhance the blood-forming system – the first induction of stem-cell production by a small-molecule drug. |
| 2007 | Dr. Stuart Orkin and colleagues show that difficult-to-treat myeloproliferative syndromes, which can progress to leukemia, are rooted not in errant blood stem cells, as previously thought, but in the cells’ surrounding environment. The new understanding helps explain why normal blood stem cells transplanted into patients with myeloproliferative syndromes sometimes become diseased themselves, and may pave the way to novel therapies. |
| 2007 | Dr. Deborah Waber and colleagues report the first data to emerge from the <u>National Institutes of Health</u> MRI Study of Normal Brain Development. The findings offer a first glimpse at the effects of gender, age and income on cognitive performance in a broad population of healthy children, and provide a comprehensive reference for future research and clinical practice. |
| 2007 | A team led by Dr. Gabriel Corfas provides the best evidence to date that defects in the brain's white matter are a key contributor to schizophrenia, showing that two of the dozen or more genes previously linked with schizophrenia – neuregulin 1 and erbB4 – induce pathologic changes in the white matter that unbalance the dopamine system. The new understanding of schizophrenia raises the possibility of early diagnosis and perhaps preventive treatment. |
| 2007 | Dr. David Fisher finds that the cancer-suppressing protein p53 is doubly protective when it comes to melanoma: it not only guards against cancer-causing DNA damage from the sun, but also kick-starts the tanning process, spurring production of skin-darkening melanin. The discovery might someday be applied to help prevent skin cancer, even in people unable to tan well. |
| 2008 | Children's Hospital Boston has been awarded Magnet status, an exclusive designation developed by the American Nurses Credentialing Center to recognize health care organizations that exemplify nursing excellence. Only 5 percent of hospitals worldwide have achieved Magnet status; Children's is now the first exclusively pediatric hospital in New England to receive the distinction |

1.2.1 *The Children's Hospital Boston Campus*

The hospital's campus in Boston is comprised of the Main Campus and the Autumn Street campus (see Figure 1-1). The Main Campus includes areas to the south (approximately eight acres) and north of Longwood Avenue (approximately 2.7 acres). Figure 1-2 shows the existing Main Campus buildings. The 0.9-acre Autumn Street parcel is bounded by Autumn Street, Longwood Avenue, and the Riverway, and includes two buildings: 1 and 21 Autumn Street. The Hospital also owns or leases facilities outside of the LMA as shown on Figure 1-1.

Section 2.3 includes information on buildings owned by Children's, their principal uses, year built, number of floors and building area.

1.3 **Children's Mission and Objectives**

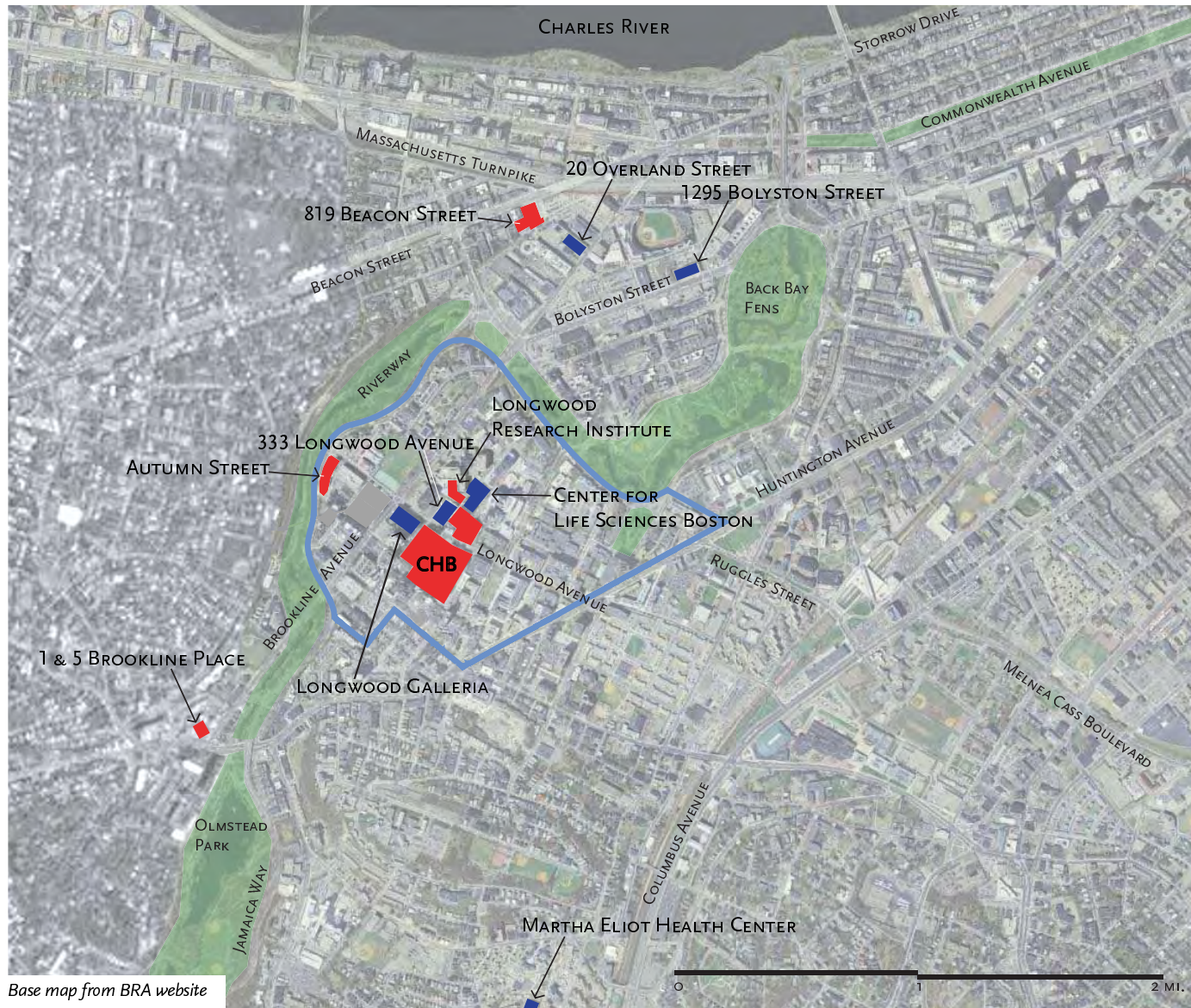
1.3.1 *Mission & Objectives*

As the pre-eminent pediatric referral center in the nation, Children's Hospital Boston's mission is to provide the highest quality health care. It is also the hospital's mission to enhance the health and well-being of the children and families in the local community. In support of this mission, Children's strives to be the leading source of research and discovery, seeking new approaches to the prevention, diagnosis and treatment of childhood diseases as well as to educate the next generation of leaders in child health.

The proposed Main Building Expansion furthers the CHB mission by expanding the hospital's patient care capacity by 39 net new beds. Providing these new beds will help CHB continue its tradition of the highest quality of diagnosis and treatment of pediatric diseases.

1.3.2 *Patient Care*

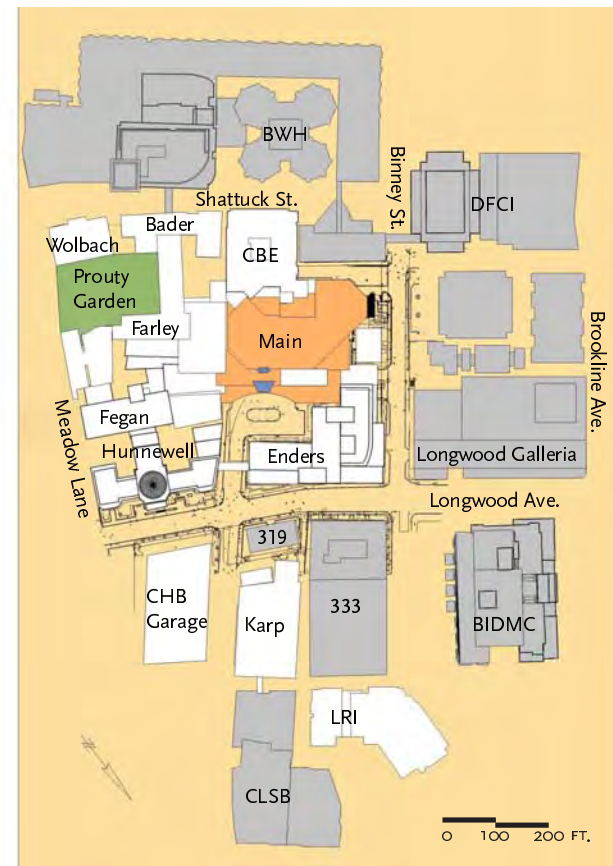
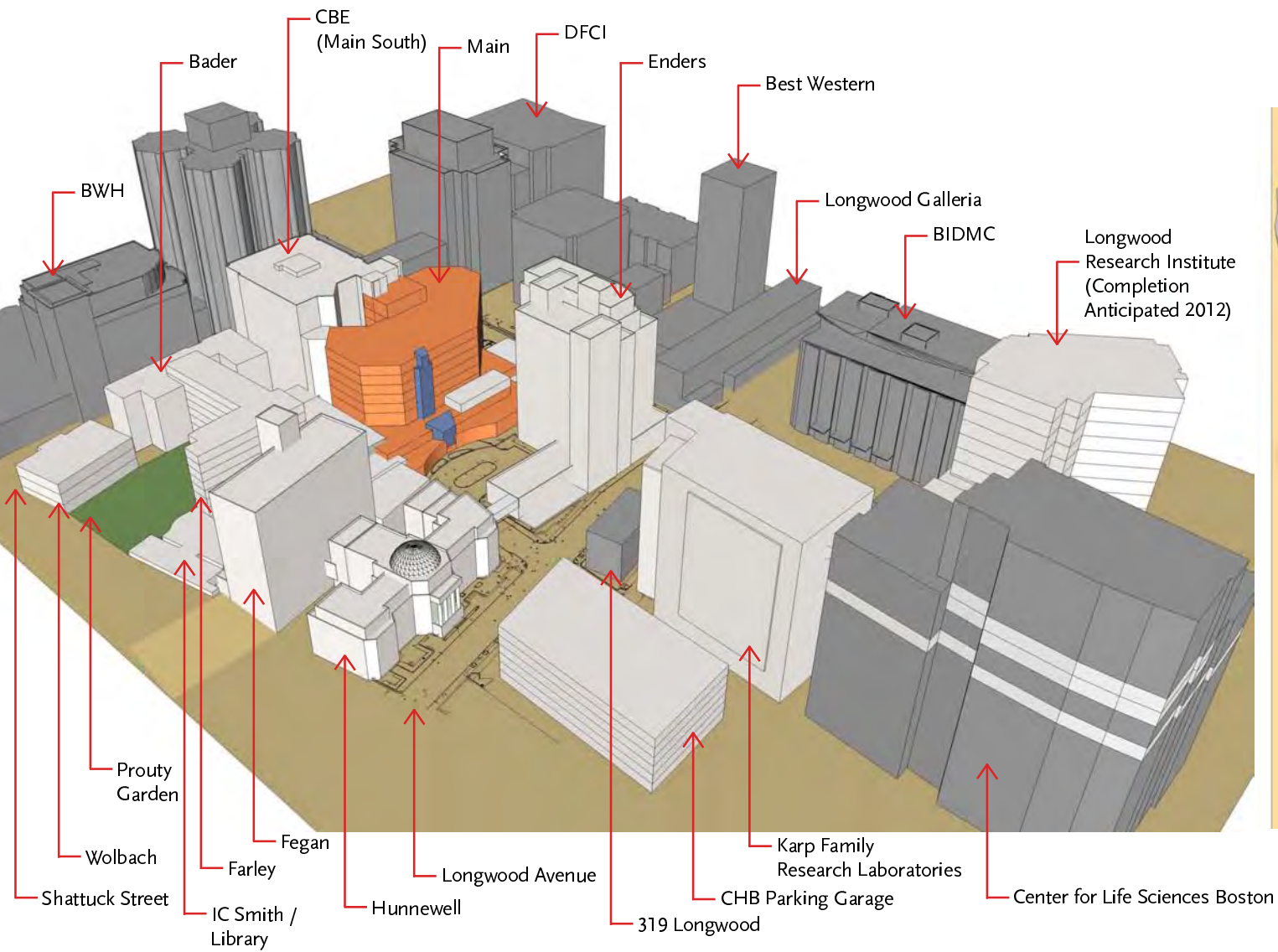
As one of the largest pediatric medical centers in the United States, Children's Hospital Boston offers a complete range of health care services for children from birth through 21 years of age. In addition, when medical circumstances require long-term, follow-up care (such as for patients with Cystic Fibrosis or those who have undergone cardiac surgery), the hospital often treats adult patients. Children's records over 21,000 inpatient admissions and observation discharges each year, its outpatient programs served over 500,000 patients in Fiscal Year (FY) 2006, and approximately 50,000 visits are made to its emergency room every year. The hospital also performs 170,000 radiological examinations every year.



- OWNED FACILITIES
- LEASED FACILITIES
- LONGWOOD MEDICAL AREA



FIGURE 1-1 CHILDREN'S HOSPITAL FACILITIES



The hospital's clinical staff represents more than 30 pediatric specialty services and 150 pediatric subspecialty services. Physician groups provide care for patients not requiring high-level tertiary and quaternary care at locations owned and leased by Children's throughout eastern Massachusetts. By providing care at Children's suburban facilities in Beverly, Brockton, Framingham, Lexington, Norwood, Peabody, Waltham, and Weymouth, Children's Hospital Boston can focus on providing tertiary and quaternary care for the system and serving as the community hospital for Boston children (see Figure 1-3). Children's is the largest provider of health care to the children of Massachusetts and the largest provider of care to children that are uninsured or covered by Medicaid in Massachusetts.

1.3.3 Teaching

Home to the largest, most comprehensive pediatric medical and surgical training program in the United States, Children's attracts about 775 residents (research/clinical) and Fellows from around the world each year. Approximately half of first-year residents hail from the country's top ten medical schools. In 1995, Children's medicine residency program merged with Boston Medical Center's program to create the Boston Combined Residency Program in Pediatrics, the first joint pediatric training program in the country. Children's also supervises 200 – 250 medical students in clinical rotations every year. As the pediatric medicine teaching affiliate of Harvard, all active staff physicians at Children's hold faculty appointments at Harvard Medical School.

The hospital has worked to integrate advocacy education and to encourage local community outreach among its medical residents. Since 1999, the Advocacy Clinic Training project has enabled young physicians to get out of the hospital and experience the neighborhoods of Boston, including activities such as providing workshops in a local school and testifying at the State House.

1.3.4 Research

Children's Hospital Boston is also home to one of the world's largest pediatric research facility. Within the John F. Enders Pediatric Research Laboratories (named for the 1954 Nobel Prize recipient who cultured the polio and measles viruses at Children's) and Karp Family Research Laboratories are 1,200 principal investigators, research fellows, post-doctoral students, medical students and laboratory technicians searching for answers to some of the most perplexing childhood illnesses and diseases. The Children's research program is awarded more grant support from the National Institutes of Health than any other pediatric research program in the country and is the fifth largest recipient of NIH funding of all independent hospitals. Federal funding to Children's increased 88% from 2000 to 2004. Total research funding reached over \$160 million in FY 2006. Although the trend in research funding from NIH is leveling off, Children's is committed to continuing its ongoing research initiatives and will pursue new sources of research funding from the private and corporate sectors.



- OWNED LOCATIONS
- LEASED / OTHER LOCATIONS



FIGURE 1-3 CHILDREN'S HOSPITAL LOCATIONS

Through the years, scientists at Children's have set the pace in pediatric research, identifying treatments and therapies for many debilitating childhood diseases. Children's researchers have been instrumental in eradicating some of the most serious illnesses that for generations threatened young lives. In the 21st century, Children's scientists are bringing genomics, proteomics, informatics, and other cutting-edge disciplines to bear on age-old diseases, including infections, hereditary illness, congenital disorders, and cancers, as well as performing translational research on Alzheimer's disease and macular degeneration, to identify root causes of these adult illnesses, which may, in fact, be formed in childhood.

1.3.5 Community Benefits

Promoting the health and well-being of the children and families in the local community is also one of Children's Hospital's core missions. The hospital has encapsulated its vision for Boston's children in a few simple words: "Healthy Children. Healthy Communities." This commitment requires that the hospital reach a more comprehensive definition of child health, form deep and lasting partnerships with community organizations, and view children's health in the context of the environments children live in. This vision is predicated on the hospital's commitment to four fundamental "deliverables":

- ◆ Serving as the community/safety net hospital for children of Boston.
- ◆ Focusing on the most pressing health care needs.
- ◆ Supporting essential community partners.
- ◆ Speaking out as a voice for children.

Children's is actively addressing these issues and working towards this vision through its numerous community benefits programs described in Chapter 7.0. Please see Appendix B for Children's Annual Report on Community Benefits Fiscal Year 2006.

1.3.6 Values

Children's is guided by the following values:

- ◆ **Excellence:** Children's is committed to achieving and maintaining a standard of excellence in the provision of patient care and all related services; in its support services and systems; in the quality of work in research laboratories; and in education programs. Children's consistently strives to make the patient experience, in particular, a model of quality care through advanced treatment, compassionate support, and full family participation and communication.
- ◆ **Sensitivity:** Children's believes that sensitivity means a compassionate awareness of the stress experienced by families of ill and injured children with an understanding of the impact it can have upon the emotions and behavior of the children and families. Children's strives both to anticipate and respond to issues arising from complex

personal and family situations and provide the support that can contribute to the best possible outcome for the child and family. Children's also believes that sensitivity means a recognition of and respect for the diverse backgrounds of both the patients and families Children's serves and the employees throughout the hospital.

- ◆ **Leadership:** As an academic medical center devoted to the practice of pediatrics, Children's fosters an environment of innovation and discovery, with individual and team contributions to advancing pediatrics in all areas of their mission: patient care, research, teaching and community service.

1.4 Children's Facility Needs

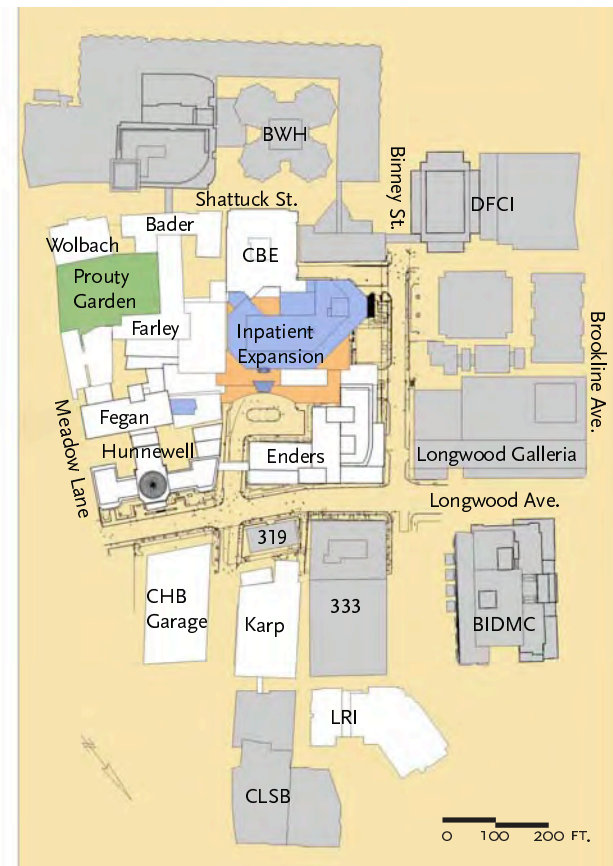
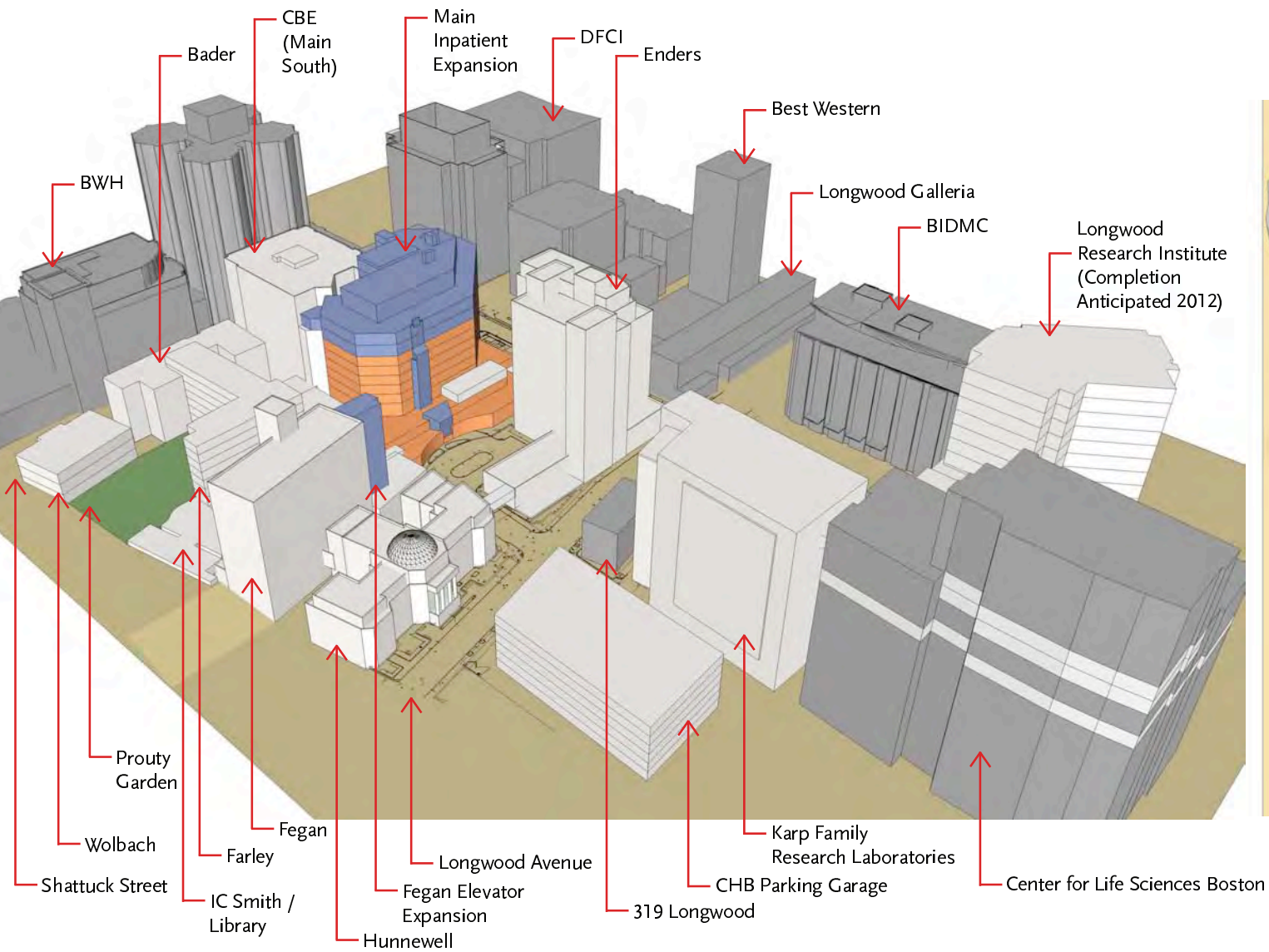
Since its inception, Children's has continuously adjusted with the changes in healthcare requiring updates to its facilities in order to meet the medical needs of the community. Many of the facility issues facing Children's today have existed since the hospital first opened. While the hospital has created much needed new clinical and research space in the past few years, the campus continues to experience limitations such as insufficient bed capacity, constrained space for families and restricted patient and family parking facilities. In addition, Children's needs to address the emerging trends of pediatric care. Specifically, Children's will need to provide space for higher acuity patients, to accommodate space needs for new technologies, and to plan for projected increases in children age birth to four years old.

1.5 Institutional Master Plan Summary

1.5.1 *IMP Project - Main Building Inpatient Expansion*

Due to higher acuity of inpatients, the demand for single and critical-care capable rooms, technology driven need for space and population forecasts, Children's recognizes an immediate need for inpatient expansion. To fulfill Children's immediate need for inpatient bed expansion, Children's proposes to add two upper level floors to the Main Building (the "Main Building Expansion"), for a net increase to the Children's Campus of 53,375 square feet of floor area. The Main Building Expansion at 60,375 square feet includes the demolition of the approximately 7,000 square foot buildings at 57 Binney Street.

The 11th and 12th floor addition to the Main Building will provide approximately 63 urgently needed critical care beds for Children's (39 net new beds). These much needed inpatient beds will bring the total bed count to 436. Figure 1-4 depicts the proposed Main Building Expansion.



Children's Hospital Boston

FIGURE 1-4 PROPOSED INPATIENT EXPANSION

ELKUS | MANFREDI
ARCHITECTS

January 2008

1.5.2 Additional Projects Proposed During Term of IMP

During the term of the IMP, Children's anticipates the development of a Patient Care Center on the site of the Enders Building. Children's is currently undertaking a planning process to determine its most critical space needs beyond the beds planned for the Main Building Expansion. At this time, it is expected that the PCC will expand inpatient beds, as well as ambulatory care services, and possibly radiology services, operating room capacity and support and ancillary spaces. The Boston Civic Design Commission has reviewed and approved the footprint, height, and setbacks of the Patient Care Center.

The construction of the PCC may occur during the ten-year term of the IMP, but its schedule and programming have not been definitively determined. The schedule for the construction of the PCC is contingent upon the relocation of existing research uses in the Enders Building. At this time, Children's envisions shifting research functions from Enders to the Longwood Research Institute (LRI) which is not yet constructed. Given the time needed to construct the LRI and to decant Enders research functions to allow for subsequent demolition of Enders, the construction of the PCC is not likely to occur until the latter half of the IMP term. Therefore, when Children's is ready to move forward with the PCC, the IMP will be amended to describe the PCC in detail and set the zoning parameters for the PCC.

In addition, Children's is considering developing the 819 Beacon Street property, located west of Kenmore Square and bound by Beacon Street, Maitland Street, and Munson Street. If this development is to occur during the term of the IMP, Children's will file an Amendment to the IMP.

1.5.3 Campus Improvements and Upgrades to Existing Facilities

Throughout the IMP term, Children's will continue to pursue facility and campus upgrades. In fact, the next five year's budgeting process includes levels of \$5.2 to \$5.8 million for future campus infrastructure projects. Typical projects include air handler and fan replacements, fire alarm system repairs and upgrades, condensate pipe improvements, electrical switch replacements, waterproofing repair, switch gear upgrades, elevator upgrades, MWRA and wastewater compliance projects, painting, roof replacement and repairs, flooring replacement, pneumatic tube system repairs and upgrades, and similar projects.

Children's is also forecasting a significant amount of capital investment over the coming years for known or anticipated facility improvement projects such as backfill renovations for spaces vacated due to technology upgrades and uses transferred to the Main Building Expansion.

Among the hospital's anticipated on-going renovation and additions to existing facilities is the Fegan Elevator Bank – a proposed elevator addition of 1,300 square feet to the Fegan Building that would provide up to four new elevator shafts to improve the movement of patients, visitors and staff around the hospital, in particular between the front entrance and ambulatory care in Fegan. The Fegan Elevator Bank project is smaller than 20,000 square feet (the threshold for an institutional master plan project).

1.5.4 Term of the IMP

Children's is submitting this ten-year Institutional Master Plan (through 2018) that will allow the hospital to pursue its vision of being a worldwide leader in pediatric healthcare and will ensure that Boston and Massachusetts residents will have full access to that care.

1.6 Evolution of the Proposed Projects

On January 29, 2007, Children's Hospital Boston submitted an Institutional Master Plan Notification Form/Project Notification Form (IMP/NF/PNF) to the Boston Redevelopment Authority. The IMP/NF/PNF proposed two projects within the term of the 10-year IMP: the Main Building Expansion and a Patient Care Center.

Since submission of the IMP/NF/PNF, Children's has determined that it must move forward with the Main Building Expansion to provide the urgently needed inpatient beds on the upper floors. It is anticipated that Children's will pursue the development of the Patient Care Center during the latter half of the term of the IMP. On December 8, 2007, CHB submitted a Notice of Project Change to the BRA removing the Patient Care Center as a proposed Project. The BRA reissued a Scoping Determination on December 26, 2007. Details on the PCC and zoning parameters for the PCC will be provided in an Amendment to the IMP when the massing and schedule are determined.

1.7 Community Benefits Summary

As the only independent pediatric hospital in Massachusetts, Children's Hospital Boston's singular focus on children and their distinct needs is key to its work with the local and regional communities. Children's is known for excellence in patient care, teaching, and research, but promoting community health is also one of the hospital's core missions.

In pursuit of this extensive community health vision, the hospital's reach is broad and deep. In FY06, Children's provided an estimated 157,000 patient visits through hospital and community-based clinical services, and reached more than 13,150 children, youth, parents, and caregivers through programs and initiatives in community settings.

See Chapter 7.0 for more detailed information.

1.8 Public Participation

Children's looks forward to continue meeting with the LMA Forum, the Task Force and other interested parties as the development review process unfolds. Table 1-1 below identifies meetings held with city agencies, elected officials, abutters and community groups.

Table 1-1 List of Meetings

| Date | Meeting |
|-------------------|--|
| April 24, 2006 | LMA Forum |
| October 10, 2006 | Fenway Civic Association |
| October 31, 2006 | Mayor's Office of Neighborhood Services / Mission Hill NHS, Fenway CDC |
| November 3, 2006 | Office of Jobs and Community Services |
| November 6, 2006 | Senator Steven Tolman, Councilor Mike Ross, Representative Jeffrey Sanchez |
| November 9, 2006 | Roxbury Tenants of Harvard |
| January 5, 2007 | The Winsor School |
| January 22, 2007 | LMA Forum |
| February 8, 2007 | Temple Israel |
| February 12, 2007 | IMP Community Task Force |
| March 2007 | Boston Red Sox |
| March 12, 2007 | IMP Community Task Force |
| March 14, 2007 | Boston Transportation Department |
| March 20, 2007 | Fenway Civic Association |
| March 27, 2007 | Boston Public Health Commission |
| March 28, 2007 | Boston Groundwater Trust (via phone call) |
| March 29, 2007 | Mission Hill NHS |
| March 30, 2007 | Office of Jobs and Community Services, Councilor Mike Ross, Boston Civic Design Commission, Boston Redevelopment Authority |
| April 18, 2007 | Fenway CDC |
| November 26, 2007 | LMA Forum |
| December 4, 2007 | Boston Civic Design Commission |

2.0 EXISTING CAMPUS AND CONTEXT

2.1 Introduction

This section presents a summary of the history of the Children's campus, a description of the hospital's existing facilities, and an analysis of the urban context of the campus, addressing land use, density, open space, view corridors, and pedestrian circulation.

2.2 History of Children's Development

Children's Hospital Boston is one of the oldest, most distinguished pediatric medical centers in the world. It grew from a modest beginning in 1869, in a single Boston brick house, to a major pediatric affiliate of Harvard Medical School. For well over a century, Children's has been a pioneer in health care for children, performing research in childhood and adult diseases, and training future leaders in medicine and surgery.

In 1869 conversations among Drs. Francis Brown, Samuel Langmaid, William Ingalls, and Samuel Webber led to the drafting and publication of *A Statement Made by Four Physicians in Reference to the Establishment of a Children's Hospital in the City of Boston*. These pamphlets were published and distributed to encourage popular support including funding for the proposed hospital.



**Children's Hospital at Washington and Rutland Streets,
c. 1870**

The appeal to the public was successful, and in 1869 the physicians purchased a brick house on Rutland Street in Boston's South End, a 10-minute walk from Dr. Brown's house on Waltham Street. This marked the beginning of Children's Hospital. Originally a 20-bed facility, the impact of the little hospital on Boston's families was almost immediate, and within a year the managers of the hospital found it necessary to relocate to the larger building on the corner of Washington and Rutland Streets. This building no longer exists; the space is now a public garden.

Knowing that a converted townhouse would never be adequate for patient needs, the managers of Children's Hospital began planning for a new building specifically designed as a hospital for children. By the end of



Children's Hospital at Huntington Avenue, c. 1882

1880, a capital campaign had raised \$95,000 and plans were announced to build a larger facility on the north side of Huntington Avenue. The new hospital opened on December 26, 1882, and provided beds for 60 patients. An additional wing with 36 more beds

opened in 1890. In it, Children's Hospital physicians and staff pioneered new discoveries and integrated them with specialized care, created departments reflecting new diagnostic and therapeutic approaches, and accelerated the professionalization of pediatric physicians and nurses.

Within thirty years after the move to the new hospital on Huntington Avenue, it had become clear that a larger, updated facility was required to meet patients' needs. In addition, the hospital's leadership understood that a closer association with Harvard Medical School would foster major scientific advances. When Harvard Medical School moved to a new site on Longwood Avenue, Children's Hospital moved adjacent to it, to a \$120,000, three-acre site on the former Ebenezer Francis farm. The mutually fruitful relationship with Harvard and the opening of a new nursing school helped Children's move to the forefront of pediatric discovery, patient treatment and medical education: outstanding medical research, clinical advances and exemplary teaching were integrated with the best possible environment for care.

In the turbulent decades between 1914 and 1946, Children's Hospital continued to grow and evolve. Development during this time period included ward buildings built behind the Hunnewell Building. The wards were designed to be small and provide maximum air and light and minimize the likelihood of spread of infectious diseases. These wards, known as "chicken coops" by those who remember them, were removed for expansion later in the 20th century. One ward, the Ida C. Smith Building, is still in existence.

Children's growing preeminence paralleled many important advances in the world of medicine. In 1929, Alexander Fleming reported on the singular effects of the *penicillium* fungus, and by the early 1940s – in time for the next great war – penicillin was in manufacture. Together with sulfa and other antimicrobials like streptomycin, physicians had new weapons – and new credibility – in fighting infectious diseases. Among many

other notable discoveries, the 1930s also brought the electron microscope, the promise of understanding the structure of viruses, the discovery of blood factors, and the development of heroic innovations in surgery.

During this era, new discoveries were reflected in further changes in Children's organization and structure. Visionary academic and clinical leaders emerged within medicine, surgery and other departments, whose foresight and accomplishments are still felt. Research laboratories opened. Cystic fibrosis, erythroblastosis fetalis and many other childhood diseases were described and studied at Children's. Medicine began to subspecialize into metabolism, hematology, and bacteriology. Scientist-physicians at Children's developed new methods of understanding and maintaining the chemical structure of the body's fluids, which improved the treatment of diarrheal diseases. Children's surgeons perfected new techniques for repairing congenital abnormalities and initiated the field of cardiac surgery. Major advances occurred in neurology relating to birth injuries, cerebral palsy, and lead poisoning, with increasing synergy between neurology and psychiatry. The "iron lung" for polio patients was developed by scientists at the nearby Harvard School of Public Health and put into practice at Children's, together with various forms of hydrotherapy and physiotherapy, to treat victims of polio epidemics. Neurosurgery, pathology, radiology and otolaryngology, and other clinical subspecialties grew in sophistication. Many physicians at Children's, still remembered today, were recognized internationally as leading the development of pediatric medicine and surgery.

Harvard medical students also began learning pediatrics on the hospital's new campus. "Residency," the period of post-graduate clinical training of new physicians, grew from four trainees in 1900 to over 30 trainees in the early 1940s. A formal curriculum replaced apprenticeship for interns and residents. Women became residents when male physicians left to serve in World War II.

Philanthropy and volunteerism continued as essential contributors to Children's success, but also assumed a more organized form through the Medical Alumni Association, the Children's Hospital Birthday Club, the Ladies' Aid Association, the Welfare Committee and many other groups. These changes would provide Children's with a strong foundation for growth and success in the ensuing years.

Following the end of World War II, experienced physicians returned from military service, resources were available for peacetime application, and medical advances accelerated. Government, understanding the importance of research to the nation's health, established programs to support academic research and increased funding dramatically. With its foundation of clinical and research excellence, Children's took a leadership position in pediatric health.



Medical Center Planners, 1946

Children's reorganized itself in 1946 as the Children's Hospital Medical Center to improve coordination of the hospital's medical and surgical departments as well as specialty care in several different fields. New buildings were necessary to support the hospital's integrated and expanding clinical, research and educational missions. The Farley Building (1956) increased space for inpatient care. The Fegan Building (1967) provided

space for ambulatory and outpatient clinics. The Children's Inn, built in the late 1960s, housed a motel with restaurant services, a twenty-four story apartment tower, a swimming pool, shopping and underground parking, and was designed to service and house staff, outpatients and visitors to Children's. In 1970, Children's built a 13-story research building named for John Enders, a Children's scientist who, with his colleagues Frederick Robbins and Thomas Weller, had won the Nobel Prize for pioneering work with the polio virus. In 1987, increasing demand from a now-global patient base required Children's to build again, this time a new facility, the Main Building, including additional space for inpatient care, operating rooms, and state-of-the-art imaging equipment.



The Main Buildings, 1987

Medical care in all subspecialties flourished, often based on new discoveries from basic and clinical research. Some old diseases, like polio and measles, decreased in prevalence because of vaccines; others, like meningitis, decreased in morbidity because of antibiotics; and some conditions began to yield to new surgical techniques or modes of pharmacological treatment that would have been unimaginable a quarter-century earlier.

New challenges emerged. Some, like HIV and adolescent substance abuse, reflected new social circumstances. Others, like many mental and communication disorders, reflected a more refined awareness and the availability of new diagnostic and therapeutic tools.

To meet children's needs, cardiology, neurology, psychiatry, anesthesiology, pathology, radiology, and numerous subspecialties of surgery and medicine rapidly developed in sophistication.

During this period, training of students, residents and fellows continued as a central mission of the hospital, as Children's educated a broad spectrum of extraordinary primary and specialist pediatric clinicians and scientists. Some stayed in Boston, but many chose to bring their expertise and dedication to communities across the nation and around the globe. These alumni of Children's are in many ways its greatest gift to pediatric health care and its greatest investment in the future of medical and biological research.

To provide much needed space for research and medical needs, Children's opened The Karp Family Research Laboratories in 2003 and a new clinical building in 2005. The Karp building is designed to foster a free flow of ideas among scientists working across many disciplines, and houses over one million zebra fish that have become a key animal model for studying many genetic diseases in humans. The new clinical building added 250,000 square feet to the campus and created new intensive care units, operating rooms, cardiac catheterization laboratories, and space for other much-needed medical and surgical beds and equipment.



The Karp Family Research Laboratories, 2003



A New Clinical Building, 2005

Children's is one of the largest concentrations of its kind in the world, bringing together thousands of the most talented clinicians and researchers. Children's prime location has made it a high-visibility hub of pediatric medicine and surgery. Effective leadership, strong

philanthropic support, and dedicated staff and employees enabled Children's to keep pace with increasing demands on its services and challenges to its mission, and to expand that mission in the local, regional, national and international communities.

2.3 Existing Campus Description

2.3.1 *Children's Campus and Facilities*

Property Owned by Children's

The hospital's campus in Boston is comprised of two main properties (see Figure 1-1):

- ◆ **Main Campus:** The main campus totaling approximately 10.6 acres, includes areas to the south and north of Longwood Avenue (Figure 1-2). The parcel south of Longwood Avenue is bounded generally by Longwood Avenue, Binney Street, Shattuck Street and Meadow Lane (privately owned by Harvard University). The parcel north of Longwood Avenue includes portions of Blackfan Circle and contains two buildings: the Karp Family Research Laboratories and the Patient and Family Parking Garage. In addition, Children's has recently purchased the phase 2 site of PDA #61 which will be the site of the Longwood Research Institute. This parcel is bounded by the Binney Connector to the northwest, BIDMC East Campus to the north and east, and South Service Road to the south.
- ◆ **Autumn Street:** The 0.9-acre Autumn Street parcel is bounded by Autumn Street, Longwood Avenue, and the Riverway, and includes two buildings: 1 and 21 Autumn Street.

Buildings owned by Children's in Boston are presented in Table 2-1 along with their principal uses, year built, number of floors, and building area.

Children's also owns a 1.6-acre property at 819 Beacon Street in Boston, north of the LMA, which is currently used as surface parking (249 spaces).

Outside Boston, in 2005, the hospital purchased the former Waltham Hospital campus with approximately 400,000 gross square feet (sf) of building area, a portion of which is currently being used by Children's. The hospital also owns a facility in Lexington in a joint venture with Beth Israel Deaconess Medical Center. Recently, Children's entered into a ground lease with an option to purchase property in Brookline, One and Five Brookline Place, totaling approximately 110,000 sf. Children's plans to develop Two and Four Brookline Place for medical office, administrative office and retail uses under a development agreement with an option to groundlease. Ancillary housing for families may be constructed at 241 Kent Street.

Table 2-1 Existing Facilities

| Hospital-owned Facilities in LMA | Year Built | Principal Uses | Floors Above / Below Grade | Height in Feet* | GSF | Zoning SF |
|--|------------|--|----------------------------|-----------------|----------|------------------|
| Main Campus, South of Longwood Avenue** | | | | | | |
| Bader | 1930 | Hospital Use: Inpatient and Ambulatory, Offices, Diagnostics / Treatment | 7 / 1 | 80 | 86,888 | 74,146 |
| Enders | 1971 | Research, Public Assembly | 13 / 2 | 227 | 210,103 | 146,311 |
| Enders Expansion | 1990 | Research, Public Assembly | 13 / 2 | 227 | 179,081 | 141,384 |
| Farley | 1956 | Hospital Use: Ambulatory, Offices, Diagnostics & Treatment | 9 / 2 | 97 | 169,000 | 130,837 |
| Fegan | 1966/67 | Hospital Use: Ambulatory, Offices, Support Space | 11 / 1 | 162 | 188,478 | 100,674 |
| Hunnewell | 1914 | Hospital Use: Ambulatory, Offices | 5 | 65 | 123,000 | 98,044 |
| Ida C. Smith | 1924 | Hospital Use: Offices | 1 | 25 | 3,438 | 3,438 |
| Library | 1994 | Hospital Use: Library | 1 | 25 | 5,518 | 5,518 |
| Main | 1988 | Hospital Use: Inpatient, Offices, Diagnostics & Treatment | 10 / 1 | 138 | 369,712 | 281,606 |
| Main South | 2005 | Hospital Use: Inpatient, Offices, Diagnostics & Treatment | 11 / 1 | 186 | 235,000 | 190,800 |
| Pavilion | 1974/79 | Hospital Use: Inpatient, Offices, Diagnostics & Treatment | 6 | 48 | 91,500 | 54,281 |
| Wolbach | 1914 | Hospital Use: Offices (plus 9 parking spaces) | 3 | 54 | 37,950 | 28,405 |
| 57 Binney Street | 1993 | Hospital Use: Offices | 2 | 22 | 7,000 | 7,000 |
| Subtotal | | | | | - | 1,262,444 |
| Main Campus, North of Longwood Avenue | | | | | | |
| Karp Family Research Building, Blackfan St. | 2003 | Research, Public Assembly, Parking (288 spaces) | 12 / 5 | 206 | 321,187 | 269,762 |
| Patient & Family Garage, Longwood Ave. | 1995 | Parking (650 spaces) | 8 / 1 | 68 | 247,807 | 215,854 |
| Longwood Research Institute*** | 2012 | Research, Public Assembly, Parking (330 spaces) | 18 / 5 | 298 | - | 440,000 |
| Subtotal | | | | | | 925,616 |
| Autumn Street | | | | | | |
| 1 Autumn Street | 1977/2003 | Hospital Use: Offices | 6 / 1 | 60 | 84,958 | 80,106 |
| 21 Autumn Street | 1929/2001 | Hospital Use: Offices | 6 | 53 | 30,253 | 29,233 |
| Subtotal | | | | | - | 109,339 |
| TOTAL | | | | | | 2,297,399 |

* Heights not surveyed. Most heights were taken from the MASCO SketchUp Model of the LMA, September 2007

** All addresses are 300 Longwood Avenue unless otherwise noted.

*** The Longwood Research Institute parcel was purchased in 2006, commencement of construction has not been determined. Prior to construction of the LRI, the existing 340 Brookline Avenue Garage (formerly the BIDMC East Campus Parking Garage), which contains 117,850 square feet of Gross Floor Area and 454 parking spaces, will remain. A portion of the 454 spaces will likely be leased to BIDMC during such interim period (and BIDMC and Children's also may agree to swap the location of parking spaces, so that CHB will have use of some spaces in BIDMC facilities and BIDMC will have use of an equivalent number of spaces in CHB facilities).

The recent addition of significant space on the Children's main campus, the Karp Family Research Laboratories (in 2003) and Main South clinical facility (in 2005), met a portion of the pent-up need for state-of-the-art research and clinical space. Prior to constructing and opening the Karp research facility, the last significant creation of research space on the campus was 13 years earlier with the Enders Expansion in 1990. Prior to Main South, the hospital's clinical facilities had not expanded in 17 years, since the construction of the Main Building in 1988. During those years, advances in medical and laboratory technologies, expanding research activities, and increasing demands for inpatient and outpatient services had put tremendous pressures on available facilities at the hospital.

Although the new space has relieved some of the pressure on available facilities at the hospital, significant demand for additional space continues to exist. The yet to be constructed Longwood Research Institute will meet some of this demand for research space, as well as provide more state of the art research space as the Enders Research Building nears 40 years old.

Children's as Landlord

Several properties owned by Children's are leased in part to others. On campus, leases to other users exist throughout Main South (for retail uses), at the Karp Family Research Laboratories (retail and laboratory uses), at the Patient and Family Garage (retail) and at One Autumn Street (private physicians office). Off campus, space is leased to others at the Martha Eliot Health Center (patient care), One and Five Brookline Place (daycare, medical office and retail) and Waltham (medical office and patient care). Children's leases approximately 100,000 square feet (patient care and patient care support) to tenants at the Waltham campus. At this point, the hospital anticipates recapturing the Karp building laboratory space (approximately 55,000 sf) and One Autumn Street space (5,800 sf) for hospital uses at conclusion of lease terms and/or lease extensions. Retail spaces on campus would remain leased to others.

Children's intent is to shift as much non-acute care and outpatient ambulatory care as possible from Boston to the Waltham campus. Children's plans to undertake a series of renovations to all structurally sound buildings at its Waltham campus and conduct detailed feasibility studies on the reuse or replacement of older buildings. The hospital's intent is to continue to provide space for tenants over the next five years, while preparing to expand the hospital's presence in Waltham over the longer term to alleviate pressure on the LMA campus.

Parking

As summarized in Chapter 2.0 (Table 2-2) of the DPIR, Children's controls approximately 2,042 off-street parking spaces in the LMA. These parking spaces include 1,413 on-campus spaces within facilities owned by Children's and an additional 629 parking spaces leased by Children's elsewhere within the LMA. Parking spaces are made available for

patients/visitors and to serve staff and physicians that need to park on the campus. In the LMA, approximately 1,104 spaces are available for public use by Children's patients and visitors while the remaining 938 are used by employees.

During the term of the IMP but prior to commencement of construction of the Longwood Research Institute, the total of parking spaces controlled by Children's will include 454 spaces in the 340 Brookline Avenue Garage (formerly known as the BIDMC East Campus Parking Garage) which may remain open until commencement of construction of the Longwood Research Institute. A portion of such spaces will likely be leased to BIDMC during such interim period (and BIDMC and Children's also may agree to swap the location of parking spaces, so that CHB will have use of some spaces in BIDMC facilities and BIDMC will have use of an equivalent number of spaces in CHB facilities). Prior to commencement of construction of the Longwood Research Institute, the 340 Brookline Avenue Garage shall be demolished. After construction of the Longwood Research Institute, 330 parking spaces will be available in that building, for a decrease of 124 total spaces.

In addition to spaces within the LMA, Children's uses an additional 1,023 spaces for employees in remote parking facilities outside of the LMA. Off-site spaces that are used by employees require shuttle services to the main campus by dedicated Children's and/or MASCO-operated shuttle services.

2.3.2 Children's Leased Facilities

As indicated in Table 2-2 below, Children's leases space as a tenant in Boston for offices and ambulatory care, as well as approximately 25,000 sf of space for the Martha Eliot Health Center in Jamaica Plain. The parcel at 333 Longwood Avenue, adjacent to the Main Campus, is comprised of an office building on approximately 1.1 acres, which is owned by a private joint venture in which Children's has an interest; a portion of this building is leased to Children's, and a portion is leased to other tenants.

Additional space is leased outside of Boston, also shown in Table 2-2. One leased facility outside Boston, Dedham, is subleased to others and will not continue to be leased upon lease expiration, as the location and size does not meet the hospital's strategic objectives. All other leases will be maintained and extended, as they serve the hospital's mission in providing direct patient care or operational support.

In addition to space leased by Children's, space for Children's physicians is made available at other medical centers in the area, including at Beverly Hospital and the MetroWest Medical Center in Framingham. Children's is not a tenant at these medical centers.

Table 2-2 Leased Space

| Leased Space | Uses | Square Feet | Lease Expiration |
|------------------------------------|---|----------------|------------------------|
| Leased Space in Boston | | | |
| 333 Longwood Avenue* | Hospital Uses: Ambulatory, Offices, Parking | 57,551 | various 2008 – 2013 |
| Longwood Galleria | Hospital Uses: Offices | 3,703 | 2009 |
| 1295 Boylston Street | Hospital Uses: Offices | 83,021 | various 2008 – 2009 |
| 20 Overland Street | Hospital Uses: Offices | 7,156 | 2014 |
| Martha Eliot Health Center | Hospital Uses: Ambulatory, Offices | 25,345 | 2011 |
| 120 Brookline Avenue | Administrative Office | 19,750 | 2012 |
| Center for Life Sciences Boston** | Hospital Uses: Research | 100,790 | 2023 |
| Subtotal | | 297,316 | |
| Leased Space outside Boston | | | |
| 128 First Avenue, Needham | Administrative Office | 6,463 | 2022 |
| Lahey/Peabody | Hospital Uses: Ambulatory, Offices | 6,573 | 2008 |
| Dedham | Sub-leased to others | 25,450 | 2007 |
| Caritas Norwood | Clinical uses | 1,873 | Tenant at will |
| Caritas Good Samaritan | Clinical uses | 1,678 | 2008 |
| South Shore Hospital | Clinical uses | 3,050 | 2011 |
| Subtotal | | 45,087 | |
| Total Leased Space | | 342,403 | |

* 333 Longwood property is co-owned by Children’s with a private joint venture and leased back to Children’s as well as other tenants. This also includes 1,259 of pending leased area.

** Space projected to become available in 2008 (currently under construction).

2.3.3 Service and Loading

The hospital’s loading and service activities are handled at several dedicated service facilities at its Main Campus. Children’s operates off-street loading areas including at its Hunnewell Building via Meadow Lane, at its Enders Building from Binney Street, and has an additional area located on Shattuck Street. In addition, some deliveries and contractors

arriving by van or passenger vehicle arrive at the Main Entrance. For this reason, the five designated valet spaces are occasionally used by short-term vendor and delivery parking at the Main Entrance. These spaces are managed by the valet operators.

Ambulances primarily access the Emergency Department from Binney Street. The Emergency Department averages approximately 12 emergency ambulance arrivals per day. Children’s also handles transfer ambulance activity via its rear entrance along Children’s Way (off of Shattuck Street). On average there are three to six transport team ambulance runs per day that utilize this rear entrance to access the ambulance garage.

2.3.4 Places of Assembly and Worship

The CHB campus includes several places of assembly. Table 2-3 lists rooms on the campus that accommodate 50 or more people.

Table 2-3 Places of Assembly

| Building Name | Room Name | Maximum Occupancy |
|-------------------|------------------------------|-------------------|
| Enders | Auditorium | 170 |
| One Autumn Street | Auditorium A | 100 |
| One Autumn Street | Auditorium B | 90 |
| Farley | Interfaith Chapel | |
| Main Building | Patient Entertainment Center | 50+ |

2.3.5 Floor Area Ratio

As shown on Figure 2-1, the existing Floor Area Ratio (FAR) on the Children's Main Campus is 4.74 and the existing FAR on the Autumn Street lot is 3.0.

2.4 Children’s Campus & Area Context Analysis

The following sections describe the urban context of the CHB campus, addressing land use, density, building heights, open space, view corridors, and pedestrian and vehicular circulation.

2.4.1 *Land Use Analysis / Building Heights*

The LMA is a densely developed area reflecting a unique concentration of medical and academic institutions. Situated approximately three miles from the Boston's downtown, the LMA is adjacent to the Mission Hill, Audubon Circle and Fenway residential neighborhoods and encompasses approximately 210 acres of land. Predominant land use in the core of the LMA, shown on Figure 2-2, includes health care, education, research, and commercial, with residential and cultural uses along the edges. Figure 2-3 illustrates existing LMA institutions.

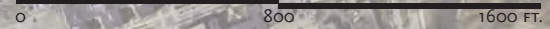
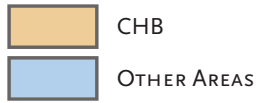
The CHB main campus of approximately 10.6 acres extends on both sides of Longwood Avenue between Brookline Avenue and Avenue Louis Pasteur. Its edges are health care and research uses, and it is generally bounded by Brigham and Women's Hospital (BWH) to the south, the Harvard Medical School (HMS) to the east, Beth Israel Deaconess Medical Center (BIDMC) to the north, and by the Dana Farber Cancer Institute (DFCI) to the west. Some mixed-use, including the Galleria/ The Inn at Children's at 410 Brookline Avenue and the Harvard Coop at 333 Longwood Avenue, abuts the main campus' western edge. In addition, CHB owns two parcels that are located northwest of the main campus at 1 and 21 Autumn Street, which house the CHB Human Resources Department and other administrative offices. These parcels total approximately 0.9 acres and are bounded generally by Longwood Avenue to the north, the Riverway to the west, and by Autumn Street to the south and east.

Existing building heights in the area range from two to over 25 stories, with most building heights under 13 stories (see Figure 2-4, Building Heights). The density of land use in the area, (as measured by Floor Area Ratio), ranges from 0.4 to 9.9 (see Figure 2-1, LMA Floor Area Ratios). At 4.74, the CHB Main Campus falls in the middle of this range.

2.4.2 *Open Space Analysis*

Significant open spaces surround and permeate the LMA. The Riverway portion of the Emerald Necklace Parks, which is the most significant open space in the area, bounds the LMA along the west and north. The Back Bay Fens also bounds the north and east edges of the LMA.

Designed by the famous Olmsted Architects, the Prouty Memorial Garden is on Children's main campus. It is adjacent to Meadow Lane and situated among the Wolbach, Farley, and Library buildings (see Figure 2-5). The garden is an oasis of flowers, trees, sculptures, and fountains that provide a peaceful respite for patients, families and staff amid the bustle of the LMA.



SOURCES:
BRA
MASCO
BWH IMP
DFCI IMP
BIDMC IMP 08.03
HARVARD IMP 02.03
EMMANUEL IMPNF/
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CHANGE 05.07)
SIMMONS DPIR 11.05
WHEELOCK DPIR 03.07



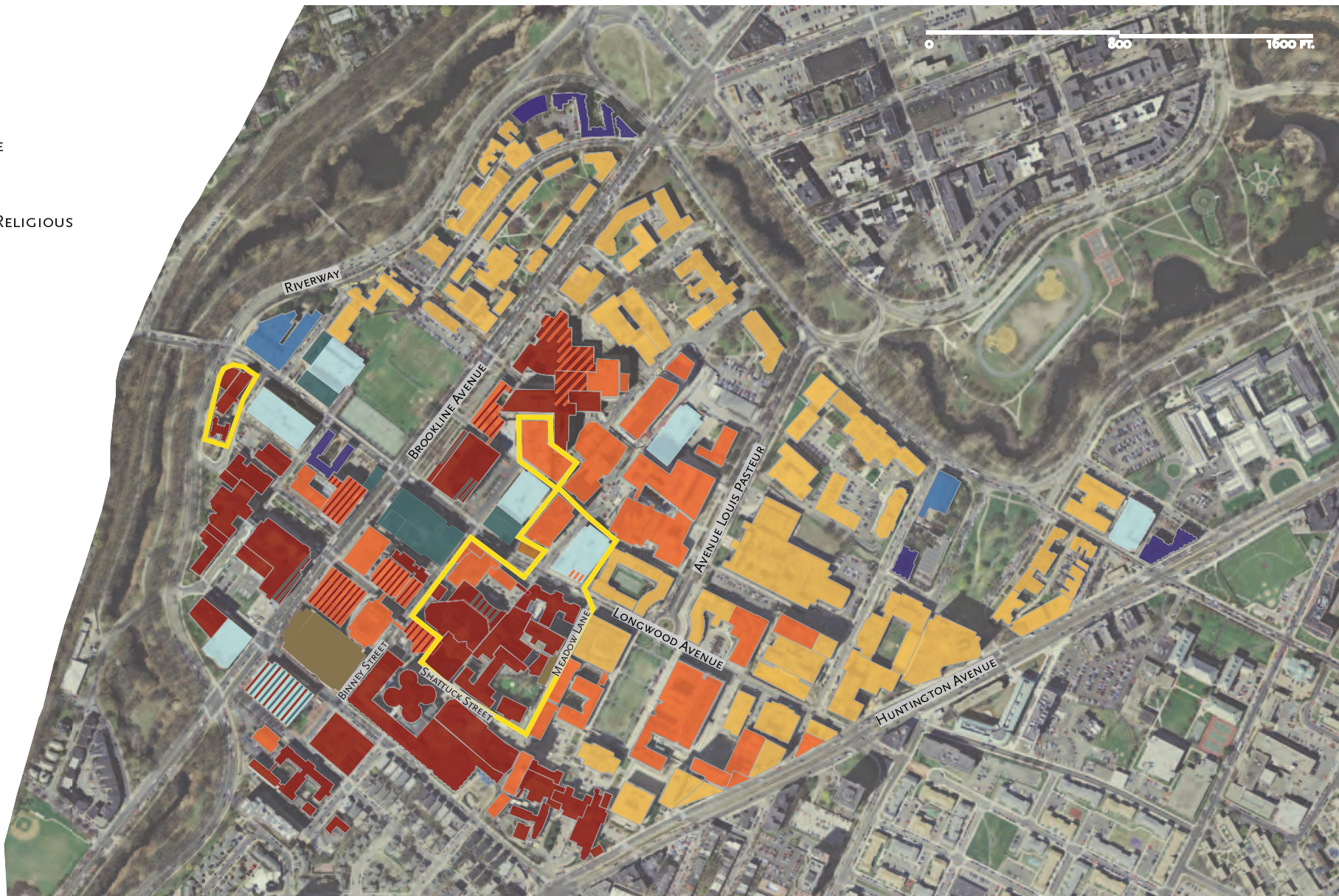
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FIGURE 2-1 LMA FLOOR AREA RATIOS

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- EDUCATION
- RESEARCH
- HEALTH CARE
- HOUSING
- CULTURAL / RELIGIOUS
- MIXED-USE
- UTILITY
- PARKING
- CHB



SOURCES:
 BRA
 MASCO
 BWH IMP
 DFCI IMP
 BIDMC IMP 08.03
 HARVARD IMP 02.03
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FIGURE 2-2 LMA LAND USE

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- CHILDREN'S HOSPITAL BOSTON
- DANA FARBER CANCER INSTITUTE
- BRIGHAM & WOMEN'S HOSPITAL
- MASS MENTAL HEALTH CENTER
- BETH ISRAEL DEAC. MED. CENT.
- JOSLIN DIABETES CENTER
- WENTWORTH INSTITUTE
- MASS COLLEGE OF PHARM.
- SCHOOL OF MFA
- EMMANUEL COLLEGE
- MASS COLLEGE OF ART
- BOSTON LATIN SCHOOL
- HARVARD UNIVERSITY
- WINSOR SCHOOL
- SIMMONS COLLEGE
- WHEELOCK COLLEGE
- GARDNER MUSEUM
- TEMPLE ISRAEL
- MASCO
- MATEP



SOURCES:
 BRA
 MASCO
 BWH IMP
 DFCI IMP
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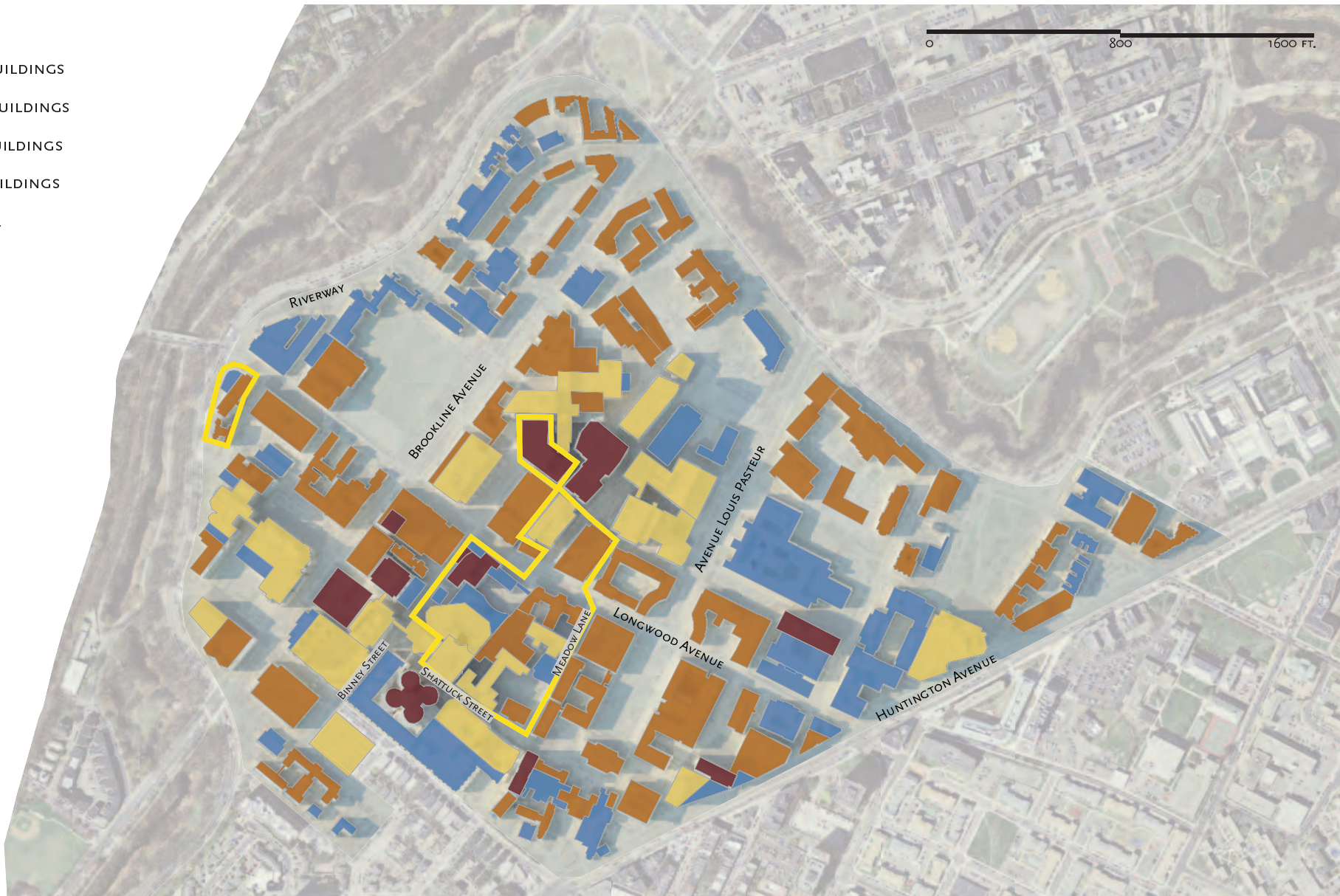
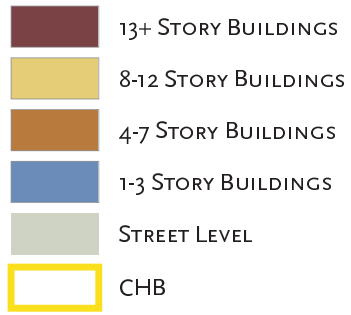


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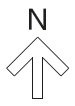
FIGURE 2-3 LMA INSTITUTIONS

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SOURCES:
 BRA
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FIGURE 2-4 LMA BUILDING HEIGHTS

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- LMA LANDSCAPED AREAS
- ADJACENT LANDSCAPED AREAS
- CHB



SOURCES:
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FIGURE 2-5 LMA OPEN SPACE ANALYSIS

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Adjacent to the CHB campus are several open space areas, including the Riverway green edge, which provides a transition from the Riverway portion of the Emerald Necklace to the LMA institutional development and includes a 6,810 square-foot children's play yard adjacent to the CHB properties at 1 and 21 Autumn Street; Joslin Park, which is a 0.3-acre open space located on Joslin Road in between Brookline Avenue and Pilgrim Road; the Harvard Medical School Quadrangle on the Harvard College's LMA Campus; the Brookline Avenue Plaza at the corner of Brookline Avenue and Longwood Avenue; and the 3.5-acre Winsor School Athletic Field located off of Brookline Avenue.

2.4.3 Historic Resources

None of the buildings owned by Children's is listed in the State and National Registers of Historic Places. Two properties owned by Children's are included in the *Inventory of Historic and Archaeological Assets of the Commonwealth* maintained by the Massachusetts Historical Commission (MHC):

- ◆ Hunnewell Building / Formerly Known as Children's Hospital Administration Building (300 Longwood Avenue)
- ◆ Wolbach Building / Formerly Known as Thomas M. Rotch Jr. Memorial Hospital For Infants

Nine historic resources listed in the State and National Registers of Historic Places are in the vicinity of the Children's campus, defined here as within a half-mile radius of the campus:

- ◆ Olmsted Park System;
- ◆ Isabella Stewart Gardner Museum;
- ◆ Massachusetts School of Art;
- ◆ Massachusetts Mental Health Center;
- ◆ Mission Hill Triangle District;
- ◆ Timothy Hoxie House
- ◆ Edward H. Haskell Home for Nurses;
- ◆ Mission Church Complex; and
- ◆ 1767 Mile Marker (Huntington Avenue).

In addition, several properties included in the *Inventory* are located in the vicinity of the Children's campus. The names and addresses of properties listed in the State and National Registers of Historic Places and properties included in the *Inventory* within a half-mile radius of the Children's campus are listed in Table 2-4. Figure 2-6 depicts the locations of these properties. Please see the Draft Project Impact Report Chapter 5.0 for a discussion of historic resources impacts.

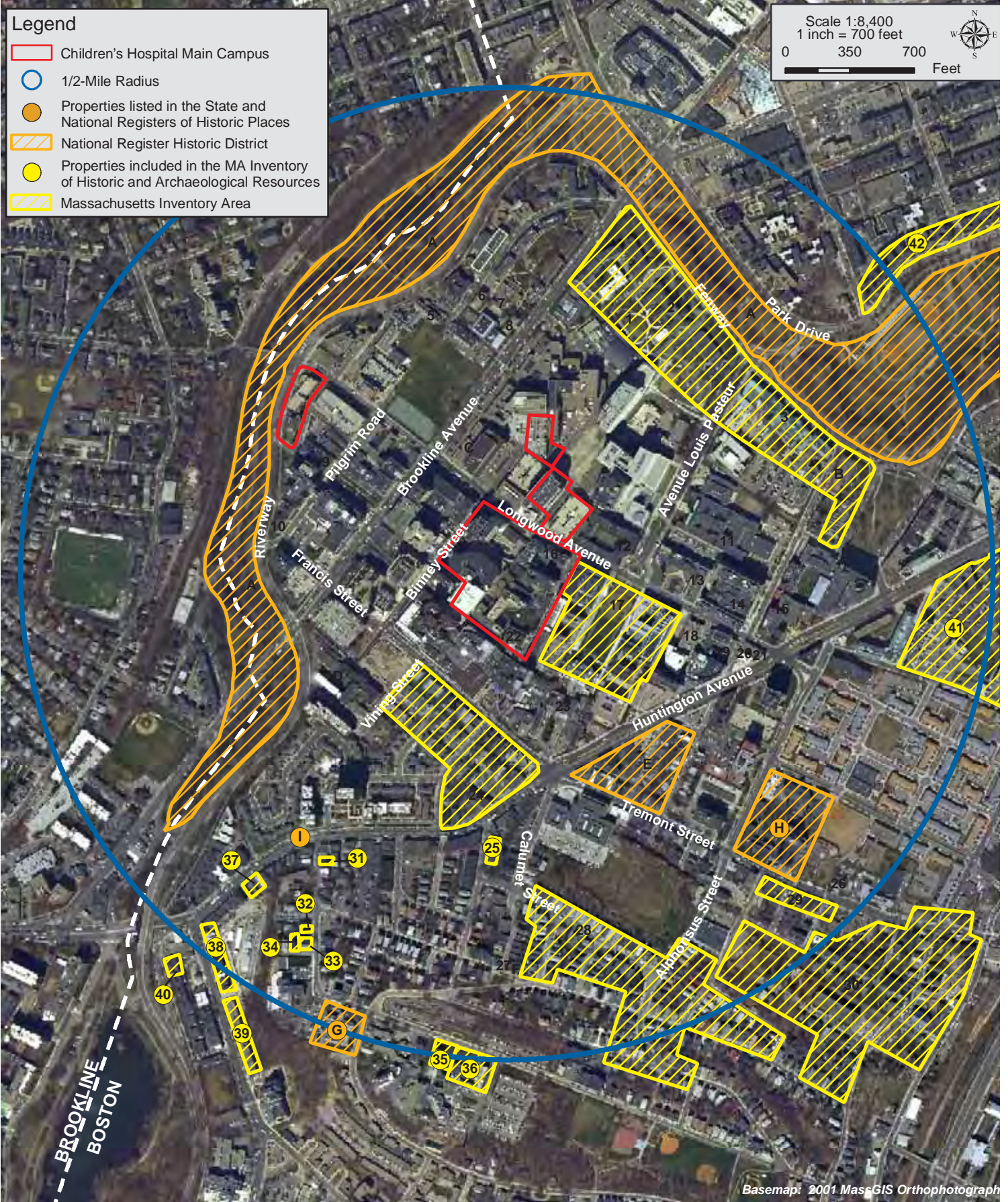


Figure 2-6
Historic Resources in Vicinity of Children's Hospital Campus

Table 2-4 Historic Resources Within and in the Vicinity of the Main Campus

| No. | Name | Address |
|--|--|---|
| State and National Register-Listed Resources | | |
| A | Olmsted Park System | Sections of the Back Bay Fens*, Emerald Necklace Parks* |
| B | Isabella Stewart Gardner Museum | 280 The Fenway |
| C | Massachusetts School of Art | 364 Brookline Avenue |
| D | Massachusetts Mental Health Center | 74 Fenwood Road |
| E | Mission Hill Triangle District | Huntington Avenue, Smith, Worthington, Wigglesworth and Tremont streets |
| F | Timothy Hoxie House | 135 Hillside Street |
| G | Edward H. Haskell Home for Nurses | 220 Fisher Avenue |
| H | Mission Church Complex* | Tremont, St. Alphonsus, and Smith Streets |
| I | 1767 Mile Stone | 841 Huntington Avenue |
| Properties included in the <i>Inventory of Historic and Archaeological Resources of the Commonwealth</i> | | |
| 1 | Southwest Fenway District | |
| 2 | Emmanuel College Main Building | 400 The Fenway |
| 3 | Simmons College Main Building | 300 The Fenway |
| 4 | Francis Street and Fenwood Road District | Francis Street and Fenwood Road |
| 5 | Winsor School | 103 Pilgrim Road |
| 6 | Simmons College, North Hall | 86 Pilgrim Road |
| 7 | Simmons College, Refectory | Behind Pilgrim Road |
| 8 | Simmons College, South Hall | 321 Brookline Avenue |
| 9 | Former New England Deaconess Hospital Building | 175 Pilgrim Road |
| 10 | Former Palmer Hospital Building | 195 Pilgrim Road |
| 11 | Boston Public Latin School | 78 Avenue Louis Pasteur |
| 12 | Vanderbilt Hall | 245 Longwood Avenue |
| 13 | Boston Lying In Hospital | 221 Longwood Avenue |
| 14 | Massachusetts College of Pharmacy | 179 Longwood Avenue |
| 15 | Girl's Latin School and Normal School | Palace Road, Tetlow Street, Huntington Avenue |
| 16 | Hunnewell Building / Former Children's Hospital Administration Building** | 300 Longwood Avenue |
| 17 | Harvard Medical School District | 210, 220, 230, 240, 260 Longwood Avenue and 25 Shattuck Street |
| 18 | Harvard Dental School | 188 Longwood Avenue |
| Properties included in the <i>Inventory of Historic and Archaeological Resources of the Commonwealth (Cont'd)</i> | | |
| 19 | Former Angell Memorial Hospital | 180 Longwood Avenue |
| 20 | Westcourt Apartment Block | 164 Longwood Avenue |
| 21 | Carlton Apartment Block | 160 Longwood Avenue |
| 22 | Wolbach Building/Former Thomas M. Rotch Jr. Memorial Hospital For Infants ** | 55 Shattuck Street |
| 23 | Peter Bent Brigham Hospital | 721 Huntington Avenue/ 15 Francis Street |
| 24 | Farragut School | 10 Fenwood Road |
| 25 | Thomas Maquire Apartment Houses | 6-16 Wait Street |
| 26 | Boston Public Library Parker Hill Branch | 1497 Tremont Street |
| 27 | Stone/Warren House | 139 Hillside Street |
| 28 | Parker Hill/Mission Hill Triple Decker District | Calumet, Sachem, Oswald, St. Alphonsus, Hillside, Iroquois streets |
| 29 | Tremont Street District | Tremont Street |
| 30 | Parker Hill/Mission Hill North Slope District | Parker Tremont, Burney, Delle, Allegheny, Hillside, Terrace streets; Terrace Pl., Folsom Ave. |

Table 2-4 Historic Resources Within and in the Vicinity of the Main Campus (continued)

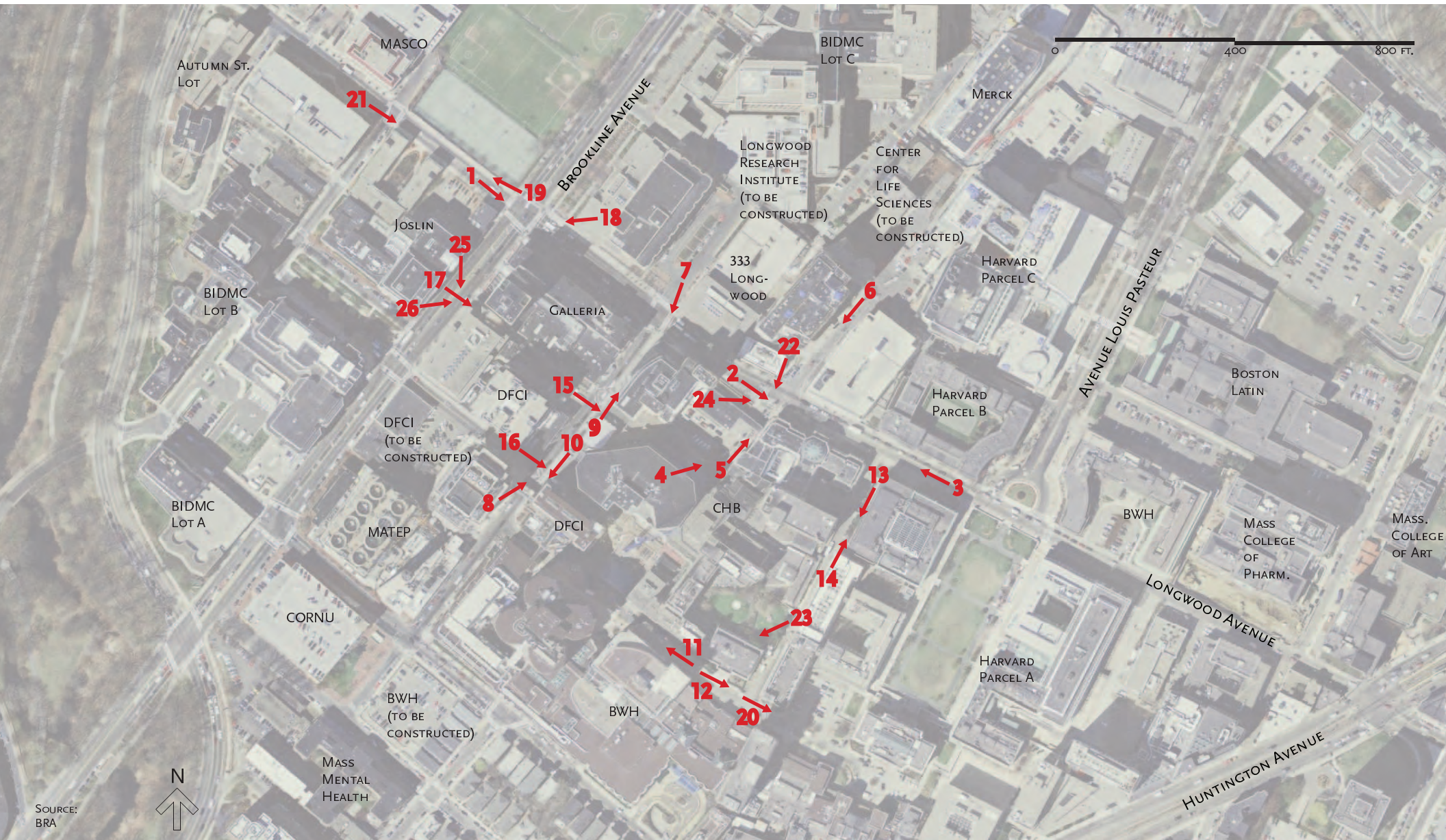
| No. | Name | Address |
|-----|------------------------------------|---|
| 31 | Delia Gilligan Three Decker | 10 Parker Hill Avenue |
| 32 | Gregory Lino Three Decker | 37 Parker Hill Avenue |
| 33 | Phillip Kresser Three Decker | 43 Parker Hill Avenue |
| 34 | Phillip Kresser Three Decker | 1 Parker Hill Terrace |
| 35 | New England Baptist Hospital | 101 Parker Hill Avenue |
| 36 | Robert Breck Brigham Hospital | 125 Parker Hill Avenue |
| 37 | James M.W. Hall Apartment Houses | 860-872 Huntington Avenue |
| 38 | William Blakemore Apartment Houses | 16-50 South Huntington Avenue |
| 39 | Morris Wheeler Apartment Houses | 49-75 South Huntington Avenue |
| 40 | Thomas Miskell Three Decker | 39-41 South Huntington Avenue |
| 41 | Ruggles Street/Parker Street Area | Huntington, Ruggles and Parker Streets |
| 42 | Park Drive Area | 1 Queensbury Street, 51-55, 61-69, 73-79, 107, 111, 117-121, 125-151 Park Drive |

Key: *Property listed as a Boston City Landmark
 **Property located within the Children’s Campus

2.4.4 View Corridor Analysis

Several view corridors exist in the area of the Children’s campus. Major view corridors are along Longwood Avenue, Binney Street, and Blackfan Street. Figure 2-7A through Figure 2-7H provide photographs of some of the corridors. Below is a summary of the more significant view corridors.

- ◆ **Longwood Avenue.** The primary view of the Children’s campus is along Longwood Avenue. Photographs 1 and 2 on Figure 2-7B show the view looking east along Longwood Avenue. In Photo 1, the view depicts the busy intersection of Longwood Avenue and Brookline Avenue with the Galleria on the south side of the street and CHB’s Hunnewell Building in the background. From Binney Street between Binney Street and Blackfan Avenue, the view east along Longwood Avenue appears more welcoming due to fewer vehicle lanes and mature street trees on both sides of the street. The view is defined by the 319 Longwood Avenue to the north and CHB’s Hunnewell Building and Main Entrance drive on the south side of the street. The view looking west along Longwood Avenue from near the Avenue Louis Pasteur (Photo 3) is dominated by CHB’s Enders Pediatric Research Laboratory Building and the experience is inviting due to the mixed scale of buildings, street trees and comfortable sidewalks.



SOURCE:
BRA



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FIGURE 2-7A LMA PHOTO KEY

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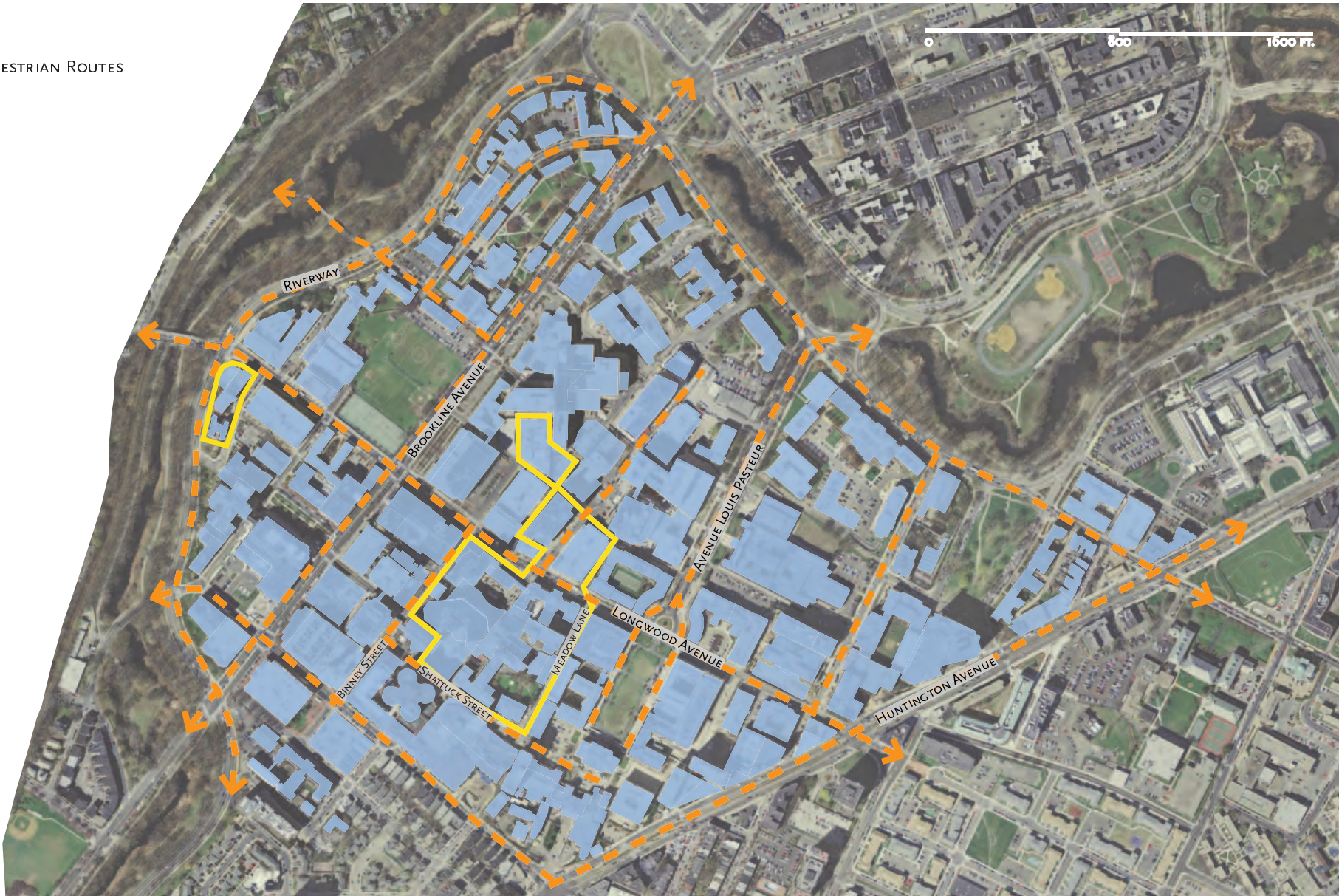


- ◆ **Blackfan Street.** Currently, the view looking south along Blackfan Street is defined by the Children’s Parking garage to the east of the street, the Karp Family Research Laboratory and the 319 Longwood Building on the west side of the street. The view culminates with Children’s Hunnewell Building, the overstreet pedestrian bridge from the Enders Pediatric Research Laboratory to the Hunnewell Building, and the Main Building on the other side of Longwood Avenue (Photo 6). As shown in Photo 22, the view of Children’s Hospital from Blackfan Street clearly demarcates the Main Building entrance to help with wayfinding from the street. The buildings along this view corridor are a mix of styles and vintages with well defined street edges.
- ◆ **Views from Main Building.** Photographs 4 and 5 depict views looking toward Longwood Avenue from the Main Building. The Main Building is set back from Longwood Avenue, shielding it from the vehicle traffic of the LMA with the exception of visitors and patients who drop off and use valet parking. The Main Building overhang provides weather-protected shelter for both pedestrians and vehicle passengers who are dropped off at the Main Entrance. From the Main Entrance, the pedestrian bridge connecting Enders with Hunnewell is visible with the Karp Family Research Laboratory in the background.
- ◆ **Binney Street, Children’s Way and Meadow Lane.** Secondary views of CHB are along smaller side streets that define the CHB campus edge; Binney Street, Shattuck Avenue and Meadow Lane. Views from these streets are defined by Children’s neighboring institutions and depict the important adjacent Children’s enjoys with its LMA neighbors, the Dana-Farber Cancer Institute, Brigham and Women’s Hospital, and Harvard Medical School. In addition to serving as borders to these other important institutions, these narrow streets and sidewalks are punctuated by loading, ambulance and other service functions for Children’s Hospital.

2.4.5 *Pedestrian Circulation Analysis*

Primary pedestrian flow paths for the Children’s campus are depicted in Figure 2-8. Major pedestrian routes in to Children’s Hospital include both the Longwood Avenue and Binney Street corridors. Pedestrian traffic crossing Longwood Avenue is steady with approximately 1,000 pedestrians per hour crossing between the Patient and Family Garage and the Main Entrance.

-  PRIMARY PEDESTRIAN ROUTES
-  CHB



SOURCES:
 BRA
 MASCO
 BWH IMP
 DFCI IMP
 BIDMC IMP 08.03
 HARVARD IMP 02.03
 EMMANUEL IMPNF/
 (NOTICE OF PROJECT
 CHANGE 05.07)
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FIGURE 2-8 LMA PEDESTRIAN ACCESS

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2.4.6 *Vehicular Circulation and Service*

The primary patient and visitor pick-up/drop-off area is located at the hospital's main entrance on Longwood Avenue. Patient and visitor self-parking is located at the Patient and Family Garage on the corner of Blackfan Circle and Longwood Avenue. Patients and visitors also utilize the nearby 333 Longwood Public Parking Garage, located on Binney Street, which is partially owned by Children's Hospital.

Children's provides valet parking services for patients and visitors of the hospital, a necessity due to patients of Children's often being brought in strollers or needing to be carried. All valet drop-off and pick-up activity occurs at the hospital's main entrance. The valet staff then moves the vehicles to the Karp Research Facility Garage or the Patient and Family Garage on Blackfan Street. On average, the Hospital valets about 400 vehicles daily.

2.4.7 *Geotechnical / Groundwater Conditions*

2.4.7.1 **Subsurface Soil and Rock Conditions**

The subsurface conditions within the main campus area consist of surficial fill underlain by marine deposits and glacial till, with bedrock at depth. The following subsurface conditions, listed below in order of increasing depth below ground surface, are anticipated:

- ◆ **Miscellaneous fill:** Successive periods of site development and use have resulted in a surficial layer of miscellaneous fill that blankets the campus. The composition of this stratum is varied, but typically consists of very loose to dense coarse to fine sand, with gravel, silt, bricks, old foundations, wood, cinders, concrete, and other miscellaneous materials. At some locations, the fill typically consists of silty clay with organic matter, gravel and cinders. The thickness of the fill is up to about 10 feet.
- ◆ **Marine Deposits:** The marine deposits soils typically consist of alternating and interbedded layers of fine sand, silty fine sand, and silty clay. The thickness of the marine deposits is anticipated to range between 40 to 70 feet.
- ◆ **Glacial Till:** The glacial till is an unsorted mixture of soil types, typically consisting of dense to very dense silty or clayey sand to sandy silt, with little gravel, cobbles and boulders. The thickness of the glacial till is anticipated to range from 5 to 20 feet.
- ◆ **Bedrock:** The bedrock below the campus is locally known as Roxbury Conglomerate or Cambridge Argillite. The upper 2 to 4 feet of bedrock is typically weathered. Bedrock exists at a depth of approximately 70 feet below ground surface.

2.4.7.2 Groundwater Conditions

Groundwater observation well readings obtained at various locations around the campus between 1984 and 2002 indicate that groundwater levels in the area may range between El. 4 and El. 20 Boston City Base (BCB). Groundwater levels near the site will be influenced by leakage into and out of sewers and storm drains and potentially into below-grade structures or subsurface drains, and environmental factors such as precipitation, season and temperature. Children's has met with the Boston Groundwater Trust to discuss the proposed Main Building Inpatient Expansion.

No subsurface construction is proposed at this time. In the event that subsurface construction is proposed during the term of the IMP, it is not anticipated to have adverse effects (lowering) on short-term or long-term groundwater levels. Construction of basements would require only minor dewatering within the limits of the excavation to facilitate excavation in the dry. Primarily, the dewatering would remove water draining from soils to be excavated, and from precipitation. The natural soils beneath the excavation have relatively low permeability, which would inhibit water seepage into the excavation, thereby avoiding groundwater drawdown outside the site. In addition, buildings in the vicinity of the Main Campus are supported on spread footings or end bearing piles/caissons. Timber pile supported buildings do not exist in the Main Campus area. Children's will coordinate with the Boston Groundwater Trust on any proposed projects during the term of the IMP that involve subsurface construction.

2.5 Existing Strengths of Children's Campus

The Children's Hospital Boston campus has evolved to sustain advantageous adjacencies and circulation for its functions. This includes patient care and research functions within the campus and connections to adjacent institutions - such as bridges to the Brigham & Women's Hospital and the Dana-Farber Cancer Institute. The existing campus is composed of structures constructed over the last century to serve an ever-growing LMA. With this in mind, CHB has accomplished connections among old and new structures with patient and staff circulation in mind. With primary caregivers being assisted by medical researchers and academics, the goal continues to be to unite the disciplines physically to best serve the patients' needs.

3.0 INSTITUTIONAL MASTER PLAN / FUTURE NEEDS

3.1 Introduction

This section presents information on Children's anticipated future trends and facility needs, projections of patient and employment growth, elements of Children's development concept plans, and master plan and urban design goals to guide Children's IMP development.

3.2 Summary of Children's Trends and Future Facility Needs

3.2.1 Recent Trends at Children's Hospital

At its facilities in Boston and throughout the region, Children's currently serves over 500,000 children on an outpatient basis and over 21,800 children as inpatients and observation cases annually. In addition, the hospital's emergency department serves over 50,000 patients each year. Approximately 20% of these children are admitted as inpatients.

Outpatient Trends

In FY 2006, the hospital performed over 23,000 surgical procedures – 19,500 at the hospital's main campus and 3,300 in Lexington – a 23 percent increase since FY 2000. The majority of all surgical procedures (68 percent) are performed on an outpatient basis. Since 2000, outpatient visits increased 22 percent at the hospital and its network. As a result of an active effort by the hospital to acquire and expand ambulatory care facilities outside its main campus to allow on-campus space to be used for more acute care, Children's has actively expanded its outpatient activities in locations outside its main campus – with over 123,500 outpatient visits (25 percent of total outpatient volume) now occurring at non-LMA facilities.

Inpatient Trends

Currently, the hospital is at capacity for inpatient activity, averaging 84 percent average daily occupancy, which is essentially full. The desired design occupancy of a hospital is 80 percent; this occupancy percentage allows for flexibility to accommodate the ups and downs of patient arrival. Recently, almost all the hospital's critical services (all of Medicine, ICU, Surgical, Organ Transplant, Oncology, Cardiology and Neuroscience) have been repeatedly closed to new admissions. Additionally, the rate of "turn-aways" of patients has increased at a rate of 50 percent this year. Children's does everything possible to make sure that these patients - many of whom have critical needs - are either transferred to another institution that can handle their care or works closely with referring hospitals to stabilize the patients until a bed is available. However, because Children's is the region's only large,

free-standing pediatric referral center, the depth and breadth of care and support available at Children's is not being made available to all children and families who may benefit from it when services are forced to close due to lack of beds.

Increasingly, the expectation is that Children's will serve as the hub of tertiary and quaternary care for the rest of the network, with less serious illness and injuries staying in the community for treatment and the more complex conditions coming to Boston for care. This is with the exception of families in surrounding communities who have come to rely on Children's as their community hospital. With more complex cases coming to the hospital, the length of stay for each patient will increase and more beds will be needed. In the last six years, there has been a 14 percent increase in patient days, at a rate 3.5 times faster than discharge growth.

Employment Growth

Over the past several years, Children's has also experienced significant growth in employment. The number of people employed by the hospital (not including those employed by physicians groups or other related organizations) grew by 2,564 between 2000 and 2005, a 55 percent increase. Most of the employment growth (2,124 jobs) occurred on the hospital's main campus in the LMA. This growth is attributable to several factors, including but not limited to the success in securing grant funds, new research and clinical facilities, increased research activity, higher acuity patients and resultant need for higher staff-to-patient ratios, and certain regulatory requirements.

Children's Hospital Boston employs approximately 16,000 people at its facilities throughout the greater Boston area. This includes approximately 7,700 employees paid directly from the hospital and over 8,000 "associated personnel" who work, study or volunteer at Children's. Approximately 35% of the associated personnel are from Boston.

According to 2006 year-end data (the last calendar year in which a full data set is available), 2,520, or 33%, of the hospital's 7,713 employees are Boston residents. Over \$107 million was paid to these CHB employees who live in the City of Boston.

Parking Demand

Over the past several years, the hospital has had the opportunity to make only modest incremental increases to its on-campus parking supply in the LMA. The Karp Family Research Laboratories added only 300 new parking spaces to Children's on-campus parking system supply in 2001. However, over the past five years, the hospital has continued to see demands on the existing supply intensify due to both higher patient and visitor demand – related to increased patient volumes and higher acuity patients, as further described below. Because patients are children, they are almost always accompanied by a parent or guardian – and this translates to parking spaces that are occupied for longer periods of time during the day and that turnover less frequently than at a more traditional hospital campus.

Children's offers its patients, visitors, physicians, and employees a multitude of options for parking. Currently Children's controls approximately 2,042 off-street parking spaces in the LMA. These parking spaces include 1,413 on-campus spaces within facilities owned by Children's and an additional 629 parking spaces leased by Children's elsewhere within the LMA, resulting in an on-campus parking ratio of 1.02 spaces per 1,000 GSF of floor area for its facilities in the LMA.. The hospital has pursued a number of strategies to address the constrained parking situation, including transportation demand management measures to reduce single-occupancy vehicle trips to the campus, moving employees to off-campus locations, remote parking, and shuttles. However, there is a current deficit of parking spaces for patient, visitor and staff demands. Children's continues to investigate ways to accommodate its projected patient demands at its main campus in the LMA.

The hospital continues to find creative ways to encourage employees to find ways to get to work other than automobiles. Children's subsidizes 50 percent of the cost of public transportation passes; currently approximately 2,450 employees are enrolled in the pass program. More than two-thirds of Children's employees use alternative means of transportation to the automobile to get to the hospital. Children's is an active participant in the LMA CommuteWorks program, which encourages telecommuting and provides carpooling assistance, emergency rides home and incentives for biking and walking to work. Despite these successful efforts to encourage alternative means of transportation, Children's recognizes that there are employees who will need or want to drive to work. To limit congestion in the LMA, the hospital subsidizes the cost of off-site parking, giving employees a 51 percent discount compared to those who park on campus.

3.2.2 Future Needs

3.2.2.1 General Trends

General hospital trends similar to conditions at Children's influencing the need for space are described below.

- ◆ **Trends in Pediatric Health Care** – Space needed for pediatric health is larger than that needed for adult health care since every child is accompanied by one or more parents or adults when they receive patient care. The more recent emphasis on “family-centered” patient care (see text box) promotes both better outcomes, and less stress to the families. In an outpatient setting, commitment to family means more space in waiting rooms and in the exam rooms themselves for extra seating for the parent; in the inpatient areas, every patient's room needs extra room for parents (chairs during the daytime, and parent sleeping areas at night).

Patient and Family-Centered Care: A Definition

Patient and family-centered care is an approach to the planning, delivery and evaluation of health care that is grounded in mutually beneficial partnerships among health care providers, patients, and families. It redefines the relationships in health care.

Patient and family-centered care is an approach to health care that shapes policies, programs, facility design, and staff day-to-day interactions. It leads to better health outcomes, wiser allocation of resources, and greater patient and family satisfaction.

Core Concepts of Patient- and Family-Centered Care

- ◆ Dignity and Respect. Health care practitioners listen to and honor patient and family perspectives and choices. Patient and family knowledge, values, beliefs, and cultural backgrounds are incorporated into the planning and delivery of care.
- ◆ Information Sharing. Health care practitioners communicate and share complete and unbiased information with patients and families in ways that are affirming and useful. Patients and families receive timely, complete, and accurate information in order to effectively participate in care and decision-making.
- ◆ Participation. Patients and families are encouraged and supported in participating in care and decision-making at the level they choose.
- ◆ Collaboration. Patients, families, health care practitioners, and hospital leaders collaborate in policy and program development, implementation, and evaluation, in health care facility design; and in professional education, as well as in the delivery of care.

- ◆ **Higher Acuity Inpatient care** – As noted above, current patient trends at Children’s (and nationally as high-end care concentrates in large-volume, high-end centers) have been in the treatment of children with more serious illnesses and medical conditions (so called “tertiary” and “quaternary” levels of care). Such patients require more procedures, longer hospital stays, and more testing and imaging. These patients also often require higher staff-to-patient ratios and more space within patient rooms for advanced medical equipment as well as for visitors, since children with higher acuity levels generally have more family staying with them and more visitors. The increased number of family members and visitors, in turn, results in the need for more gathering

and support space outside of patient rooms. Given that Children's is a regional, national, and international health care provider, long stays with many dislocated family members are particularly important to accommodate.

- ◆ **Need for Single and Critical-Care Capable Rooms** – There is a need to increase the number of single rooms that are critical-care capable, i.e., with sufficient space to host state-of-the-art medical technology. This capacity allows hospitals to provide the highest quality care and to respond quickly to external factors, e.g. accommodating critical care patients from unanticipated events or transported from other hospitals. In addition, throughout the health care industry the trend is to provide more single inpatient rooms to improve health, ensure patient privacy, and to allow for providing care at various levels (critical, intermediate and routine). Research has demonstrated that single rooms lower hospital-induced infections, reduce medical errors associated with room transfers, reduce noise, improve patient confidentiality, facilitate social support by families, and improve staff communication with patients. Currently, many of Children's inpatient beds are still in double-bed rooms.
- ◆ **Technology-driven need for space** – New image-guided procedures and minimally invasive surgeries require larger procedure rooms, more support space, and more electrical power and cooling capacity for this advanced equipment. These technologies all result in increased demands on physical space and infrastructure. Complicating this, the equipment and supplies needed for pediatric care must be provided in a wide variety of sizes, to match the size of the patients from several pounds at birth to hundreds of pounds nearing adulthood. Since the size of the patient population is unpredictable at any given time, this means support areas must accommodate a multiplicity of specialized equipment and supplies. This continuing demand applies across inpatient and outpatient spaces.
- ◆ **Population forecasts** – Current population projections by the US Census suggest increases in the Massachusetts birth-to-four-year-old age group between 2010 and 2025. This growth is expected to be in the range of 10 percent, and will result in increased patient volumes. As noted earlier, Children's is the largest provider of health care to the children of Massachusetts.
- ◆ **Continued research activity** – Mirroring a trend experienced at other Boston-area teaching hospitals, the demand for research space at Children's has also grown significantly over the past 15 years. Over this period, the amount of space allocated to research on the main campus increased by approximately 475,000 sf, or a rate of 30,000 sf per year, in order to provide space for clinical research and translational (so-called "bench-to-bedside") research. Federal funding for research at Children's grew by 88 percent from FY 2000 to FY 2004 (a 17 percent increase in 2004 alone), and total research funding is currently over \$160 million in FY 2006. Such increases are sustained by the expanded research capacity provided by the opening of the Karp Family Research Laboratories and the recently purchased but yet to be constructed

Longwood Research Institute. Although the trend in research funding from NIH is leveling off, Children's is committed to continuing its ongoing research initiatives and will pursue new sources of research funding from the private and corporate sectors.

3.2.2.2 Children's Projected Growth Trends – Patient Care

Children's is actively planning for its future to ensure that its facilities both on and off campus meet future needs. Over the past two years, the hospital has undertaken an intensive, long-range strategic planning initiative involving the hospital's trustees and over 30 department chiefs and other hospital leaders. With the input of national health care consultants, this initiative reviewed recent trends in medical treatment, research, and education, future demographics, potential changes in regional health care, and the facility needs of constantly evolving state-of-the-art medical technology and research. In addition, the strategic planning initiative continues to study existing facility limitations at the hospital's main campus and other locations, in light of these trends.

In keeping with recent efforts to expand ambulatory care at facilities outside its main campus, the hospital's long-range strategic plan envisions incremental growth at the Longwood campus over the next 20 years, while planning for much more rapid growth at its facilities outside the LMA. The master plan forecasts a 75 to 80 percent increase in outpatient activity at non-LMA facilities such as Beverly, Brockton, Framingham, Lexington, Norwood, Peabody, Waltham and Weymouth, and a 10 to 12 percent increase in outpatient visits at the hospital's main campus over the next 20 years. Off-campus visits are expected to constitute nearly 40 percent of all Children's outpatient activity by 2025. Children's also provides short-term inpatient stays (one to four days) at its Waltham campus, as it opened four new operating rooms and plans to open 11 inpatient beds at that facility in June of 2007.

By 2018, inpatient volume is expected to increase 34% from 21,844 visits in 2006 to 29,355 visits in 2018. Inpatient activity at Children's Hospital Boston is growing and projected to increase in the future for a variety of reasons. Despite flat or modest pediatric population growth, gradual changes in the pediatric healthcare market are occurring which will ultimately change the distribution of pediatric beds in the future. With the continuous push to move care from the inpatient to ambulatory setting and the challenges of providing highly specialized pediatric care to children with the most complex health care needs, community hospitals and even other children's hospitals in the region will have a difficult time providing high quality pediatric care in an economically viable manner. These challenges, coupled with the growing shortage of pediatric specialists and costly technological advances in care, will lead to the consolidation of pediatric providers and greater regionalization of care than exists today. Children's Hospital Boston is already a renowned local, regional, and national center for complex pediatric health care, but Children's expects the need and demand for services to increase significantly over the next

10 to 15 years. In addition, because of this concentration of higher acuity patients at Children's Hospital Boston, patients are hospitalized longer. Total patient bed days are expected to increase from 104,279 in 2006 to 140,136 in 2018, an increase of 34%.

As a result of these conditions, the main campus of Children's Hospital Boston needs to expand and evolve in response to both the demand for services and the space requirements associated with rendering highly complex, patient centered care to children with the most complicated conditions. There is continuous pressure, and the hospital is deeply committed, to improving healthcare delivery in terms of customer satisfaction and clinical outcomes. One of the signs of this evolution is the need for private, larger inpatient spaces. Some double occupancy rooms will be replaced by single rooms, which better accommodate more specialized, innovative care and allow parents to stay at the bedside with their hospitalized children.

3.2.2.3 Employees

Children's Hospital Boston employs approximately 16,000 people at its facilities throughout the greater Boston area. This includes approximately 7,700 employees paid directly from the hospital and over 8,000 "associated personnel" who work, study or volunteer at Children's. Approximately 35% of the associated personnel are from Boston.

According to 2006 year-end data (the last calendar year in which a full data set is available), 2,520, or 33%, of the hospital's 7,713 employees are Boston residents. Over \$107 million was paid to these CHB employees who live in the City of Boston.

Based on a review of the new beds proposed, and current staffing levels at the Hospital for similar units, it is anticipated that approximately 325 new employees will be hired as part of the proposed Main Building Expansion. In the longer term, additional staff would be hired to work in the Patient Care Center (PCC) when it is constructed. The number of new employees associated with the PCC will be determined when plans for the space are finalized. In addition to new employees associated with the Main Building Expansion and the PCC, Children's will continue to expand its staffing levels as needed to ensure its ongoing dedication to the highest quality patient care.

3.2.2.4 Future Research Needs

Children's strives to be the leading source of pediatric research and discovery, seeking new approaches to the prevention, diagnosis and treatment of childhood diseases. To support this mission, Children's has conducted ongoing research studies in the Enders Research Building. The most recent expansion of Children's research capacity was in 2003 with the opening of the Karp Family Research Laboratory in 2003 to house a thousand researchers who are dedicated to the study of various diseases. Additional research capacity will be available upon the construction of the Longwood Research Institute.

Although Children's federal funding for research increased 88 percent from FY 2000 to FY 2004, federal funding of scientific research is declining. Although the trend in research funding from NIH is leveling off, Children's is committed to continuing its ongoing research initiatives and will pursue new sources of research funding from the private and corporate sectors. The research activities at Karp Family Research Laboratory and planned for the Longwood Research Institute will be supported in part by research funding from 2000 to 2004. Beyond this recent increase in research capacity, Children's does not envision expansion of research programs at CHB over the term of the IMP.

3.2.3 Children's Facility Limitations

Since its inception, Children's has continuously adjusted with the changes in healthcare requiring Children's to update its campus facilities in order to meet the medical needs of the community. Many of the facility issues facing Children's today have existed since the hospital first opened. While the hospital has created much needed new clinical and research space in the past few years, existing facility limitations specific to the Children's main campus contribute to the need for new construction, including:

- ◆ **Single-Bed Rooms** – Even with the opening of Main South in June 2005 and the associated shifts of inpatient services in the Main Building, Children's still has a need for an additional 68 patient rooms to move existing beds into single-bed rooms.
- ◆ **Insufficient Space For Families** – While Children's currently provides a wide array of support spaces for families – the Children's library, Prouty Garden, Center for Families, laundry, dormitory space for ICU patient families, Chapel – the hospital recognizes that with patient acuity levels rising now and in the future, there will be a need to provide even more quiet and contemplative spaces that allow seriously ill patients and their families a respite from the rigors of intensive or extended medical treatment.
- ◆ **Restricted Patient & Family Parking Supply** – As noted above in Section 3.2.1, recent growth in patients, visitors, and employees has seriously constrained the hospital's existing parking supply creating the need for valet operations and aggressive management on a daily basis. In addition, the hospital will lose a net of 282 parking spaces in and near the LMA when leases expire. It is important to note that parking in the LMA today is a severe challenge. Even in the 1930s, it was carriages that clogged the sidewalk outside of the outpatient department, which once occupied space in the Hunnewell Building.

3.3 Children's Objectives

Taken together, the trends, facility needs and limitations, indicate a need to increase capacity and flexibility to meet future demand for services at the Longwood campus.

Specifically, the hospital's facility objectives under its long-range strategic planning initiative include:

- ◆ Increasing Bed Capacity – One factor requiring the increase of bed capacity is the increase in patient bed days – patients staying longer due to higher acuity levels in recent years does not allow for the efficient “turn-over” of bed space. In addition, with the expansion of its inpatient capacity, one of the significant factors driving the hospital's inpatient space demand is its goal of creation of all single-bed rooms. Contemporary planning benchmarks will dictate the size, shape, and location of the supporting functional areas.
- ◆ Increase Children's parking supply for patients and families - Children's needs to increase the hospital's on-campus supply to ensure that its main campus has sufficient parking to support its core patient services over the long-term. The Patient Care Center project is likely the last opportunity for Children's to develop a significant amount of sub-surface patient and family parking on-campus. Despite the elimination of on-campus employee parking and conversion of employee spaces to patient parking, creation of new patient and family parking is critically important to achieving the hospital's mission to continue to be a world-class provider of tertiary and quaternary care for children.
- ◆ Improving site entry conditions and creating an inviting “front door” to the campus via improvements to access for patients arriving on foot and by vehicle. Currently, the first image that patients arriving by foot or vehicle receive is that of a congested vehicular driveway with high levels of valet parking activity or patient drop off, a narrow busy sidewalk leading to the hospital's revolving front door, and a handful of other unsigned doorways and passageways for employees. Children's wants to create a clear, well signed, and pedestrian-friendly front door to improve on patients' and families' first impression of the hospital.
- ◆ Providing support space for families by creating new spaces for gathering, resting and contemplation. With more and more long-term acute-care patients, the healing environment requires that the hospital provide places (away from patient rooms and activity areas), where parents and their ill children can reconnect and have private time.
- ◆ The construction of new state-of-the-art space to replace functionally obsolete space and the provision of patient/family parking and campus maintenance projects will allow the hospital not only to meet its programmatic needs, but to ensure the campus's long-term viability, and enhance the overall environment of the hospital.

3.4 Alternatives Analysis of Development Locations and Concept Plans

3.4.1 *Strategic Planning – Alternatives Analysis*

Children’s conducted a strategic planning initiative as described in Section 3.2.2.2. In order to respond to the trends and objectives of the long-range strategic plan, Children’s focused on how to maximize its available facilities through a comprehensive analysis of the hospital’s varied uses. One of the principal goals of the hospital’s strategic plan is to allow on-campus growth to focus on acute care and related research and education, while moving less acute care and administrative functions off-campus, to the extent practicable. This will better serve patients in Boston and surrounding suburbs by allowing the LMA campus to be the tertiary and quaternary hub for the system and the community hospital to the children of Boston, while more routine care can be delivered at more convenient locations in the suburbs. The strategic plan has identified the need for several LMA campus development and improvement projects over the next 10 years to provide sufficient clinical, research and hospital support space to meet Children’s mission. Most importantly, the hospital has identified an urgent need for new inpatient beds to serve its growing acute care patient population.

In keeping with recent efforts to expand ambulatory care at facilities outside its main campus, the hospital’s long-range strategic plan envisions incremental growth at the Longwood campus over the next 20 years, while planning for much more rapid growth at its facilities outside the LMA.

3.4.2 *Concept Development Plan*

3.4.2.1 **On-Campus**

While undertaking the strategic plan design, the need for clinical space was explored at several locations on the existing main campus. One such location was a new facility to be constructed above the existing Hunnewell building and extending southward to Prouty Garden. This plan added ambulatory space to the hospital program; however, the location of this new facility would not work well for inpatient space due to circulation and connectivity issues with the existing inpatient buildings.

The next area which would provide a sufficient increase in inpatient bed space would be on the footprint of the current Enders research building. This plan would not be an immediate solution to the urgent need for bed space since the decanting of existing research functions and construction of a large inpatient facility afterwards would project completion too far into the future.

The solution, as presented in this master plan, is to undertake the 11th and 12th floor inpatient expansion of the Main building to acquire urgent bed space while using the Enders site – for the future Patient Care Center – as the next logical step.

3.4.2.2 Off-Campus

Children's intent is to shift less acute care and outpatient ambulatory care to the Waltham campus from Boston, as much as possible. Children's plans to undertake a series of renovations to all structurally sound buildings at its Waltham campus and conduct detailed feasibility studies on the reuse or replacement of older buildings. The hospital's intent is to continue to provide space for tenants over the next five to ten years, while preparing to expand the hospital's presence in Waltham over the longer term to alleviate pressure on the LMA campus.

To acquire and expand ambulatory care facilities outside its main campus to allow on-campus space to be used for more acute care, Children's has actively expanded its outpatient activities in locations outside its main campus – with over 123,500 outpatient visits (25 percent of total outpatient volume) now occurring at non-LMA facilities. A small portion of the future inpatient growth may be accommodated off-campus at sites such as Waltham and the North and South Shore facilities. Leased spaces outside of Boston will be maintained and extended to continue Children's mission in providing direct patient care or operational support.

3.5 Urban Design Guidelines

To realize the development concept described above, Children's has outlined the following principles to guide urban design:

Master Plan Goal 1 - To improve the physical identification of Children's Hospital Boston within the Longwood Medical and Academic Area

Implementation - Add physical features visible from the primary pedestrian and vehicular LMA route, Longwood Avenue. This would include items such as banners and physical elements which display the hospital name and logo. The current hospital entrance is not on Longwood Avenue itself but within the drop-off below the Main building. The improvement of hospital identification will aid in way-finding to the hospital.

Master Plan Goal 2 - To improve and expand gathering space for patients and families

Implementation - Wherever possible, add gathering areas which are naturally lit, comfortable, and convenient for families. At the moment, Prouty Garden is the primary quiet space within the campus. Add gathering and quiet areas for families in closer proximity to the patient rooms. This would not only increase the amount of family space but also create indoor space that can be used during inclement weather.

Master Plan Goal 3 - To improve the quality of Longwood Avenue

Implementation - Introduce a mixed-use environment on Longwood Avenue. The current lobby includes retail areas and waiting areas; however, it is separated from Longwood Avenue by the drop-off. Moving the lobby closer to Longwood Avenue would enhance the way-finding to the hospital. It would also further activate the street by pushing the retail and waiting areas closer to the pedestrian activity on Longwood. This would also involve solving the traffic congestion of the current drop-off. A reconfiguration of vehicular circulation would aid in making the lobby more inviting and easier to access for patients, families, staff, and visitors.

Master Plan Goal 4 - To create flexible clinical spaces for future use

Implementation - Use simple geometries with regular structure and contemporary dimensions for future flexibility and to meet reasonably expected institutional, incremental growth. Create additional, flexible patient space for the future to ensure proper, quality care by hospital support staff. This forethought of design will improve the overall urban design character of the campus area. By planning for the future, the internal spaces can dictate appropriate building massing and campus organization.

Master Plan Goal 5 - To improve the pedestrian and vehicular circulation of the hospital campus

Implementation - Consider future design goals and improvements to existing spaces by acknowledging the connectivity of the campus to the LMA and the connectivity of the spaces within the campus. Use intuitive signage and circulation to aid way-finding to and within the hospital. Minimize conflicts between pedestrians and vehicles at the congested Longwood / Blackfan intersection. Design patient and support spaces such that staff have easy access in the tertiary care environment and where patients feel comfortable to easily navigate.

Master Plan Goal 6 -To practice environmentally sustainable design

Implementation - Use LEED and GGHC guidelines to implement sustainable practices. Implement practices which provide for water use reduction, optimized energy performance, construction waste management, etc. In addition, design family gathering spaces which provide for maximum natural light.

3.6 Master Plan Goals

The nature of the Longwood Medical and Academic Area offers expertise in clinical research combined with care for patients in critical need. This affords opportunities unique for bettering the lives of those children most in need, but also demands that Children's Hospital Boston stay current with the times and evolve accordingly. The vision of the Hospital is to continue to meet the demand for critical care while maintaining the same

quality of care for non-critical cases at its off-campus locations - such as in Waltham. While it is difficult to predict the exact need, it is important to the Hospital to continually consider all the best options for its physical evolution in relation to patient needs and comfort.

The immediate goal is to solve the urgent need for additional patient beds through the 11 and 12 floor expansion of Main. The overall master plan goal is to design a hospital campus that is cohesive and modern for staff to work in while being intuitive to navigate and comfortable for patients.

The vision of Children's Hospital Boston beyond the Institutional Master Plan adheres to the goal of offering the best patient care possible concurrent with the most up-to-date and efficient technology needed to maintain that goal.

4.0 PROPOSED PROJECTS

4.1 Introduction

This chapter provides descriptions of the project proposed by Children's within the term of its IMP, 2008-2018 as well as on-going upgrades to existing facilities.

4.2 Proposed IMP Project

4.2.1 *Main Building Inpatient Expansion*

To meet the immediate need for inpatient bed capacity, Children's is proposing an addition to its Main Building. This IMP Project will add two stories comprising 60,375 square feet and a total of 39 net new beds. These much needed inpatient beds will bring the total Children's inpatient bed count to 436 by 2011. The Main Building Expansion is 163'-3" in height.¹ The Main Building Expansion will also include a mechanical penthouse roof above this floor. In order to construct the Main Building Expansion, Children's will demolish the 7,000 square foot 57 Binney Street Building to allow a staging area for the construction crane. Table 4-1 provides details on the Main Building Expansion.

Table 4-1 Summary of Proposed Institutional Projects

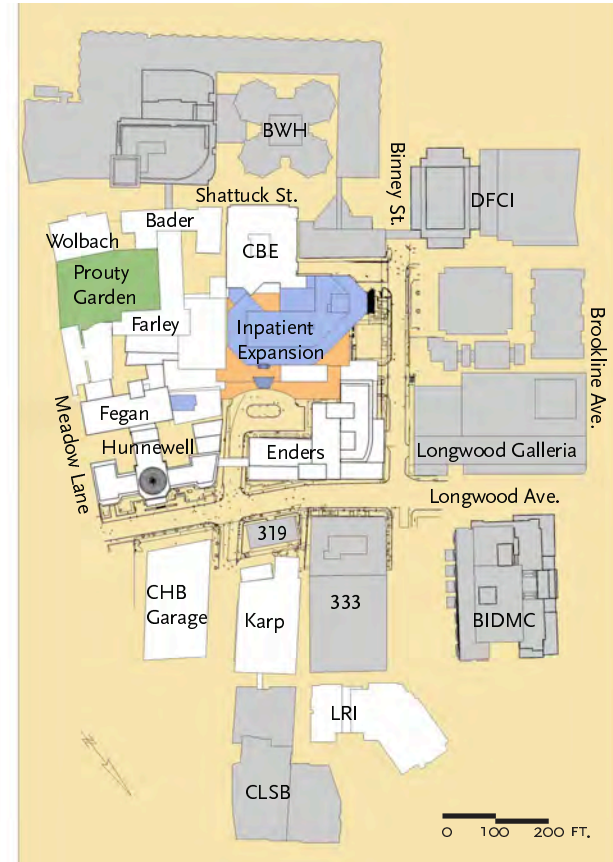
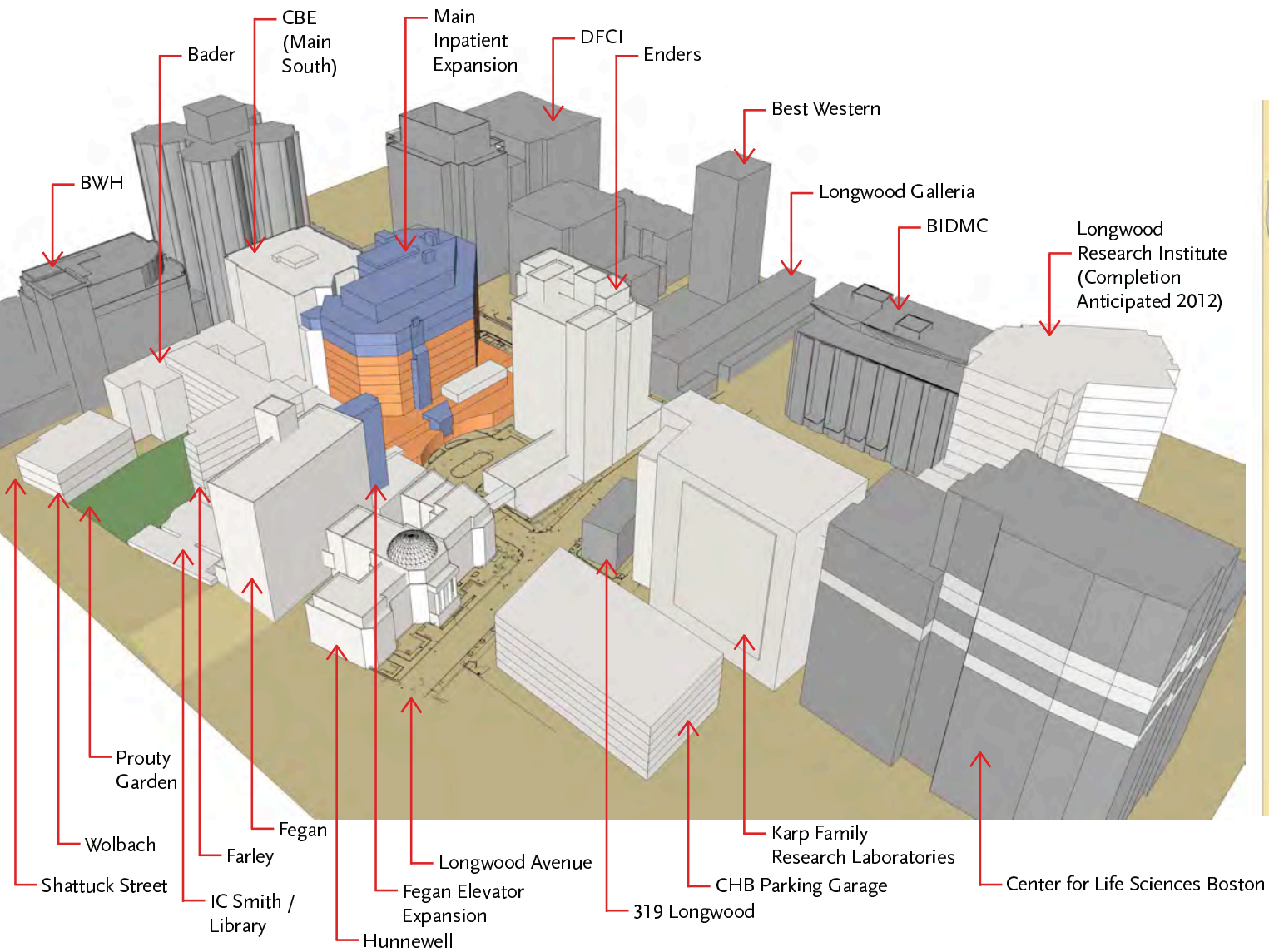
| Proposed IMP Project 2008-2018 | Approx. Size* (gsf/pkg spaces) | Demolition/ Existing | Net New* (gsf) | Approximate Construction Dates |
|--|-----------------------------------|-------------------------|-------------------|--------------------------------------|
| Main Building Inpatient Expansion (11 + 12) | 60,375 sf | 7,000 sf | 53,375 sf | Mid 2008 to early 2011 |

* Square footages are estimates, as defined by the Boston Zoning Code.

The Main Building Expansion will be designed to take cues from the existing Main Building façade. The vertical addition will be clad in a glass skin. The Main Building Expansion will aid in the way-finding to the hospital by extending the existing Main Building 'waterfall' element, capped with a hospital logo, along with a vertical banner attached to the Main building façade below – visible from Blackfan Street.

Please see Figures 4-1 through 4-13 for illustrations of the existing Main Building and the proposed Main Building Expansion.

¹ As required under Article 2A of the Boston Zoning Code, such base elevation is set at the average base elevation of the Binney Street sidewalk between Children's Way and the Enders Building (37 feet), but no more than five feet higher than the average elevation of the ground immediately contiguous to the building (26 feet). The Main Building Expansion will also include a mechanical penthouse roof above this floor, occupying less than 1/3rd of the total area of all Main Building roofs, which is not included in height under Article 2A.



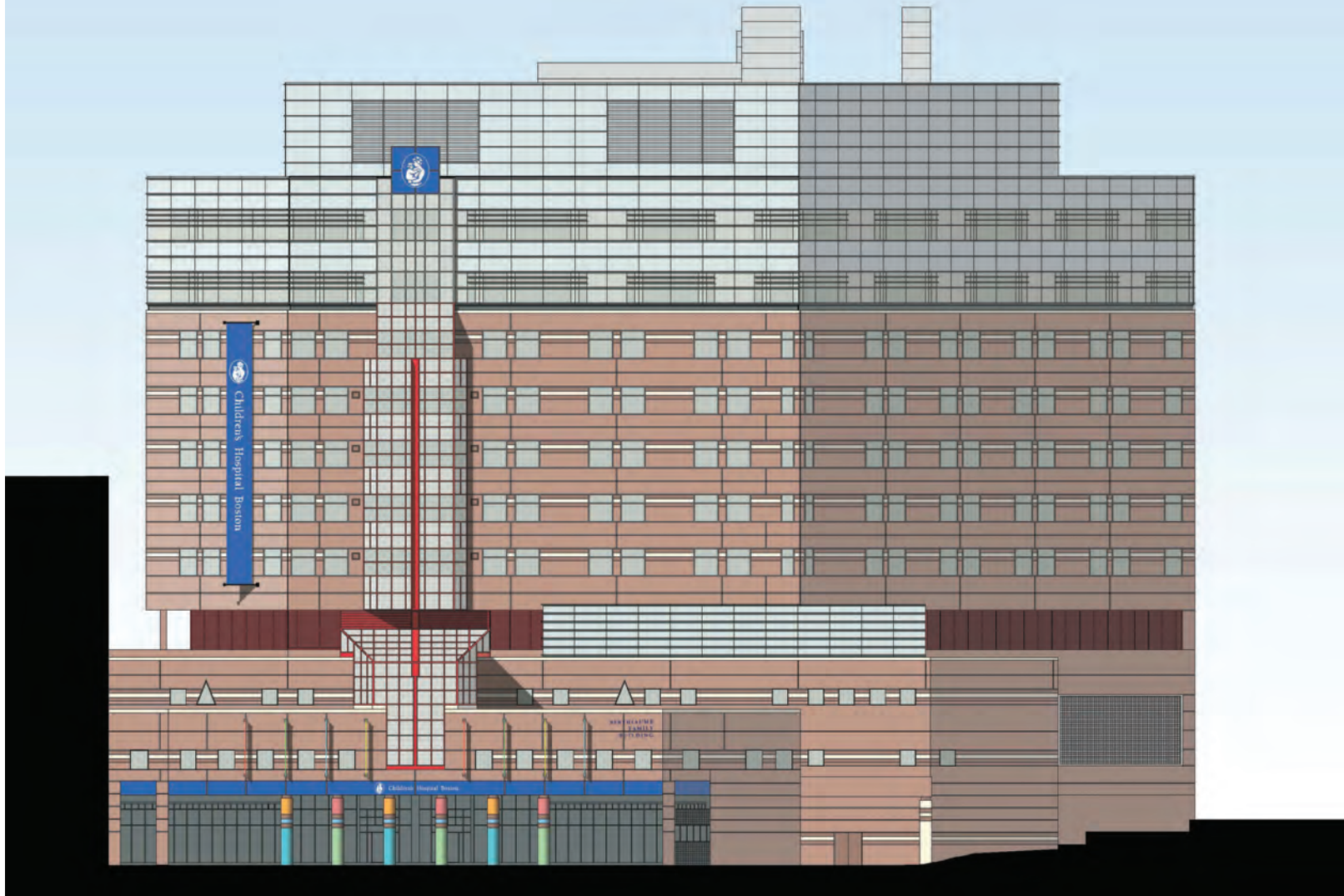
Children's Hospital Boston

FIGURE 4-1 PROPOSED INPATIENT EXPANSION

ELKUS | MANFREDI
ARCHITECTS

January 2008

MAIN BUILDING
9 - 28 - 07
SHEPLEY BULFINCH

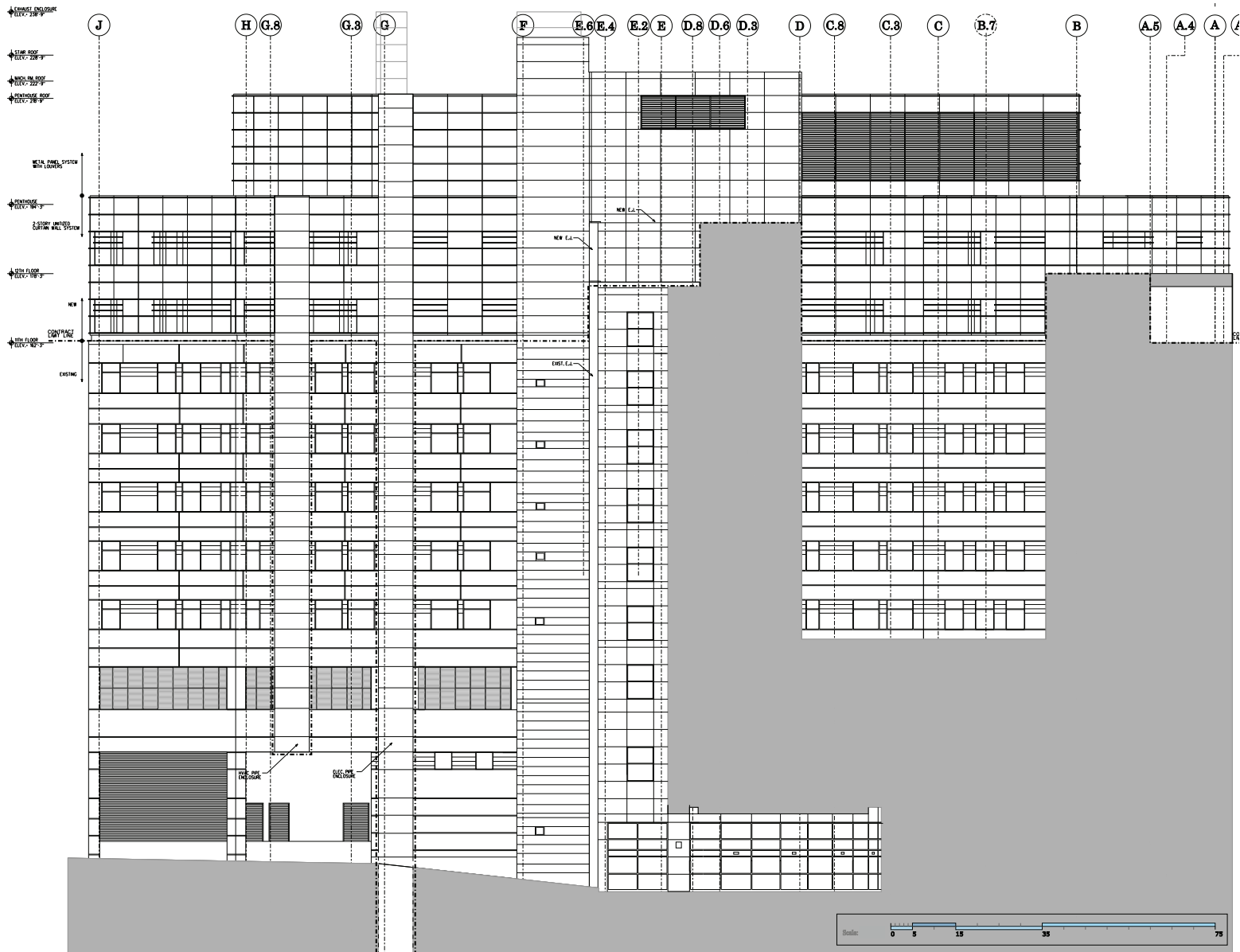


Children's Hospital Boston

FIGURE 4-2 INPATIENT EXPANSION - NORTH ELEVATION

ELKUS | MANFREDI
ARCHITECTS
Shepley Bulfinch Richardson & Abbott

January 2008



Children's Hospital Boston

FIGURE 4-3 INPATIENT EXPANSION - SOUTH ELEVATION

ELKUS | MANFREDI
ARCHITECTS

Shepley Bulfinch Richardson & Abbott

January 2008

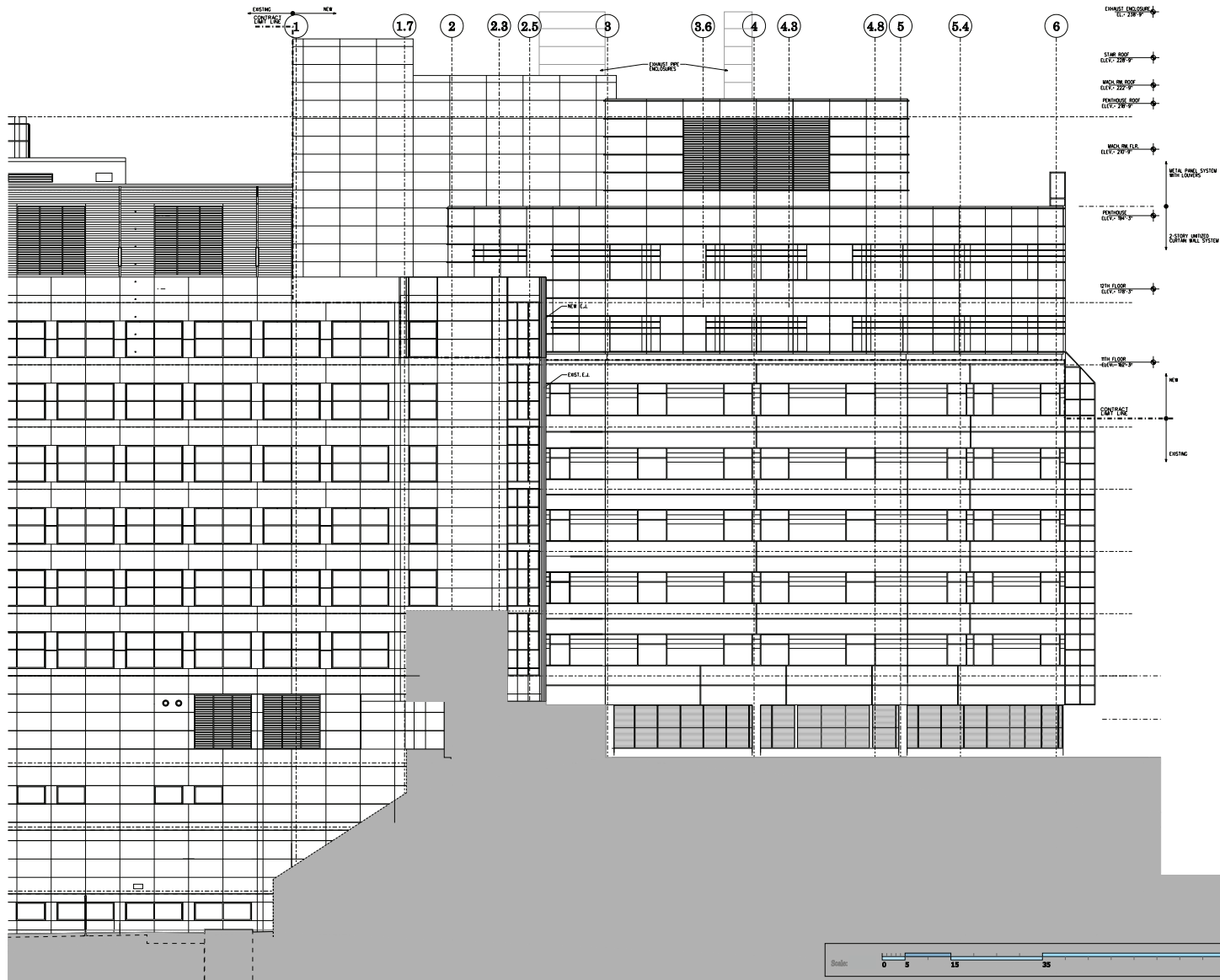
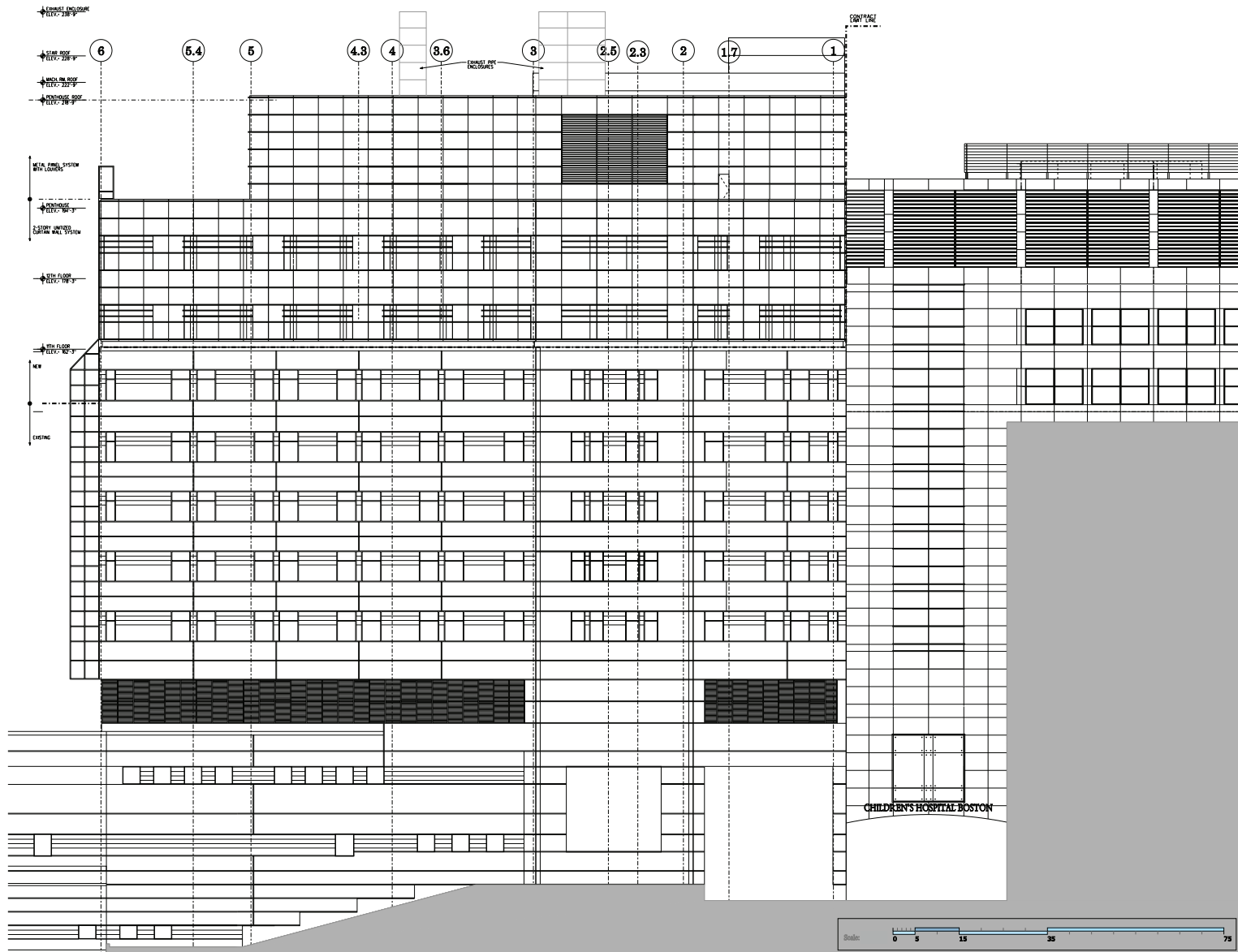
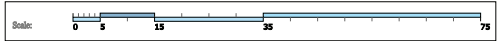
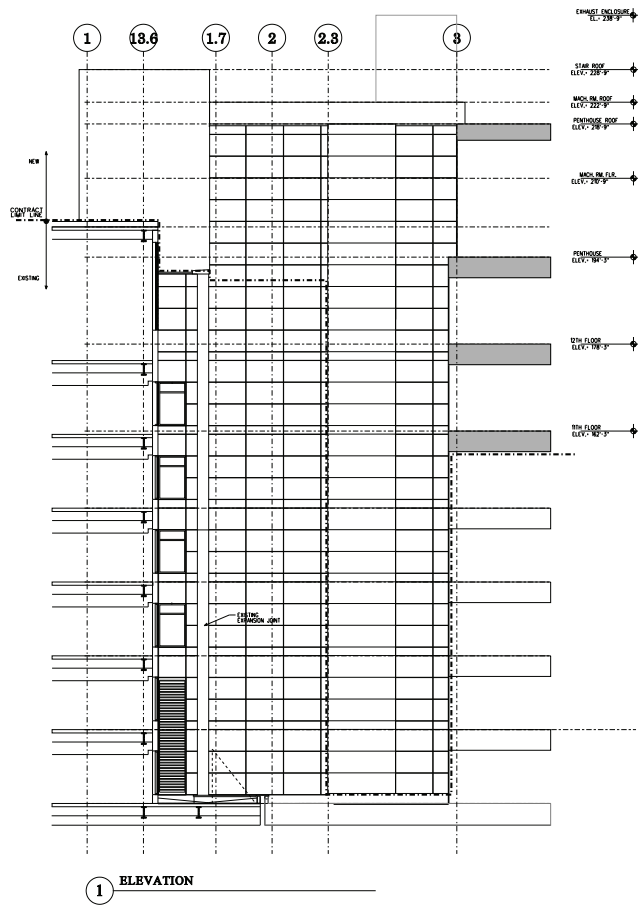
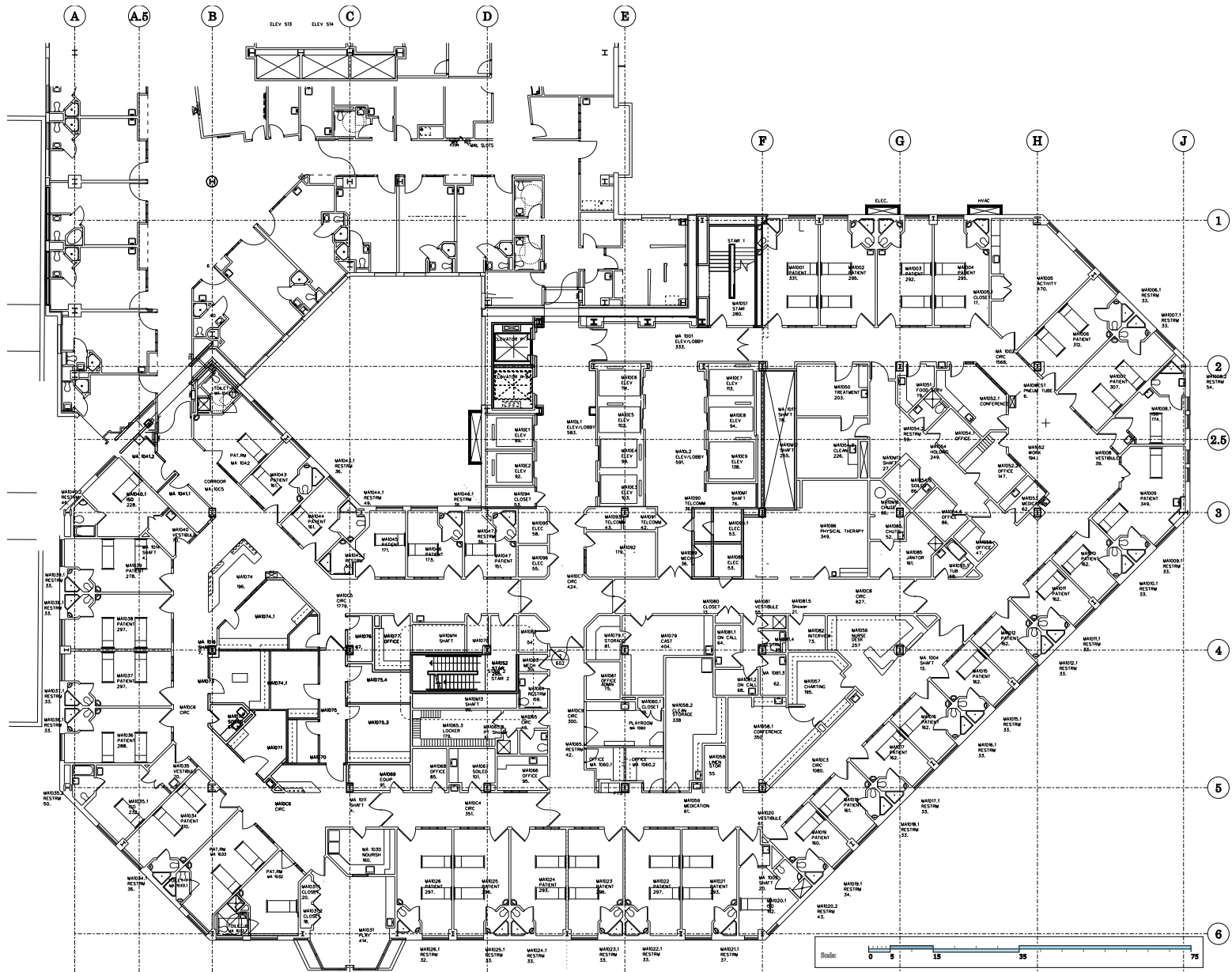


FIGURE 4-4 INPATIENT EXPANSION - EAST ELEVATION







Children's Hospital Boston

FIGURE 4-7 INPATIENT EXPANSION - FLOOR 10 PLAN

ELKUS MANFREDI ARCHITECTS
Shepley Bulfinch Richardson & Abbott

January 2008

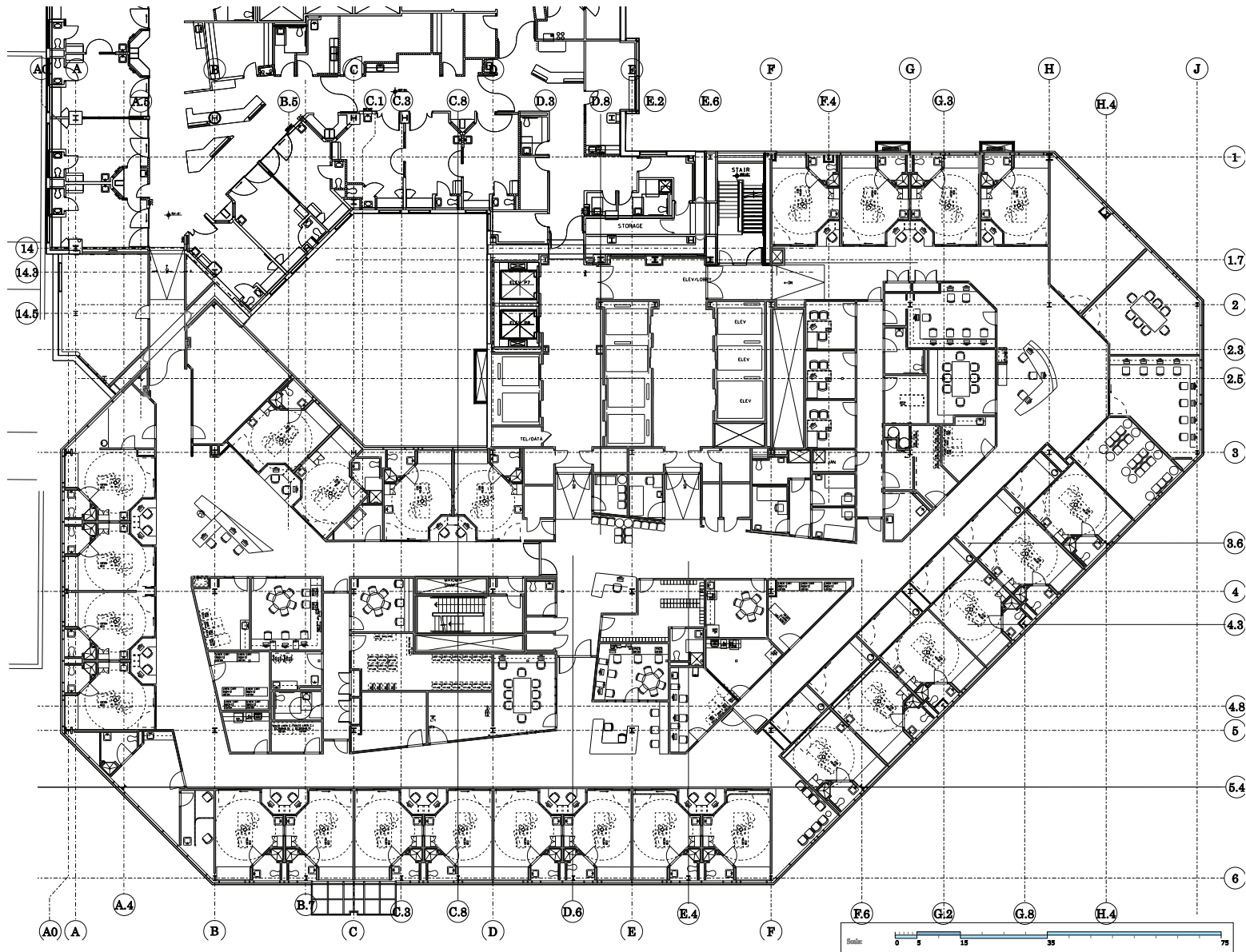


FIGURE 4-8 INPATIENT EXPANSION - FLOOR 11 PLAN

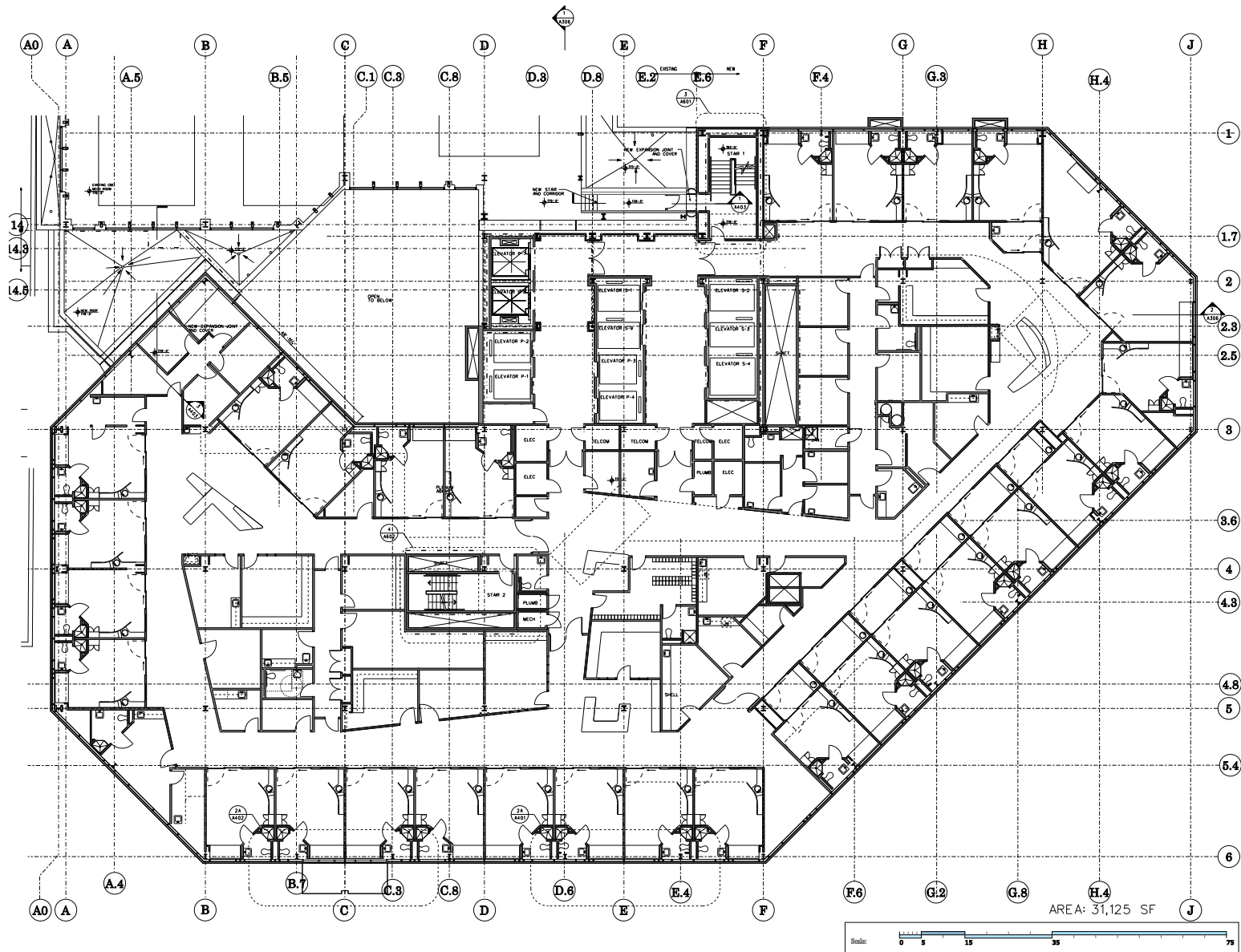
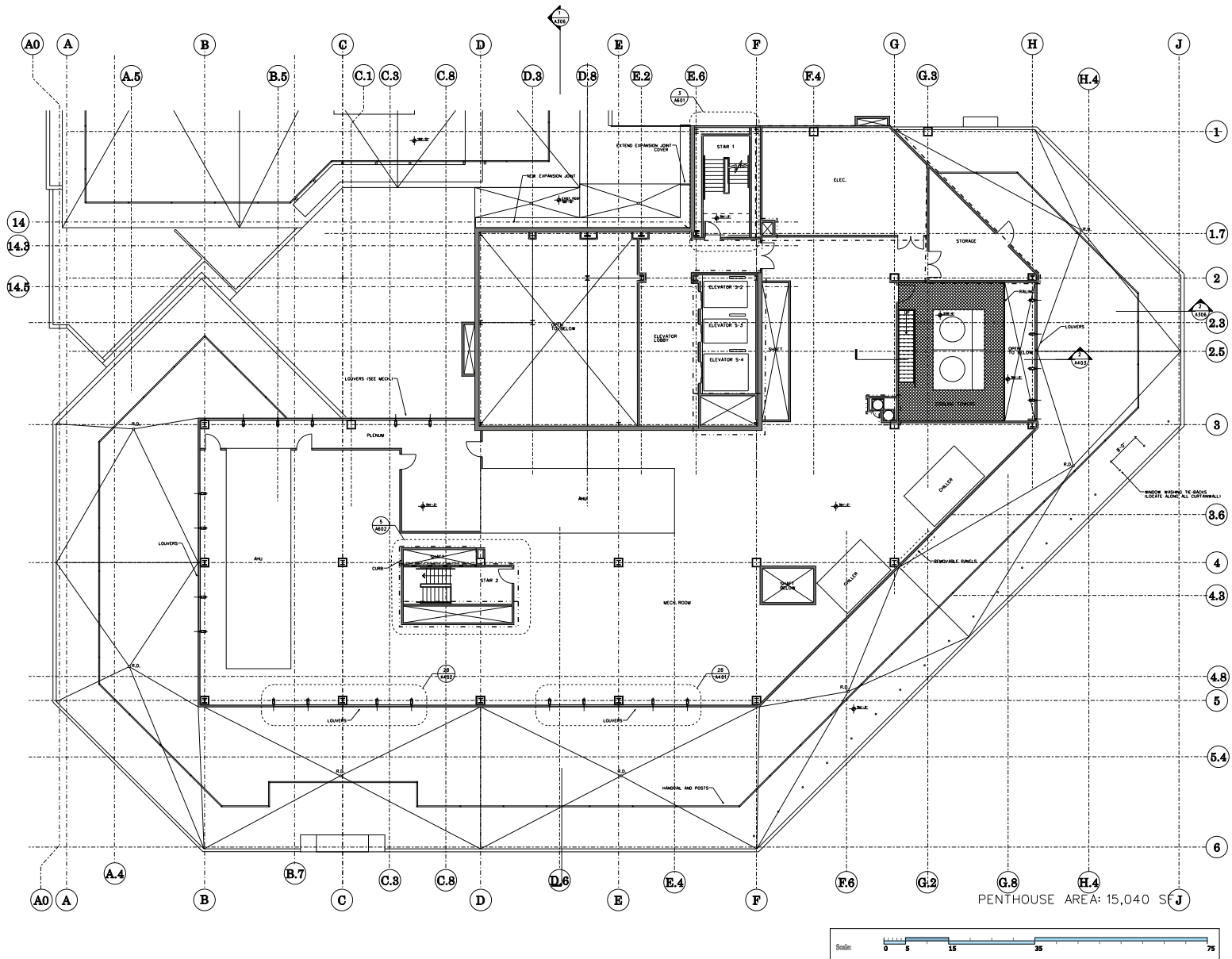


FIGURE 4-9 INPATIENT EXPANSION - FLOOR 12 PLAN



Children's Hospital Boston

FIGURE 4-10 INPATIENT EXPANSION - PENTHOUSE PLAN

ELKUS MANFREDI ARCHITECTS

Shepley Bulfinch Richardson & Abbott

January 2008

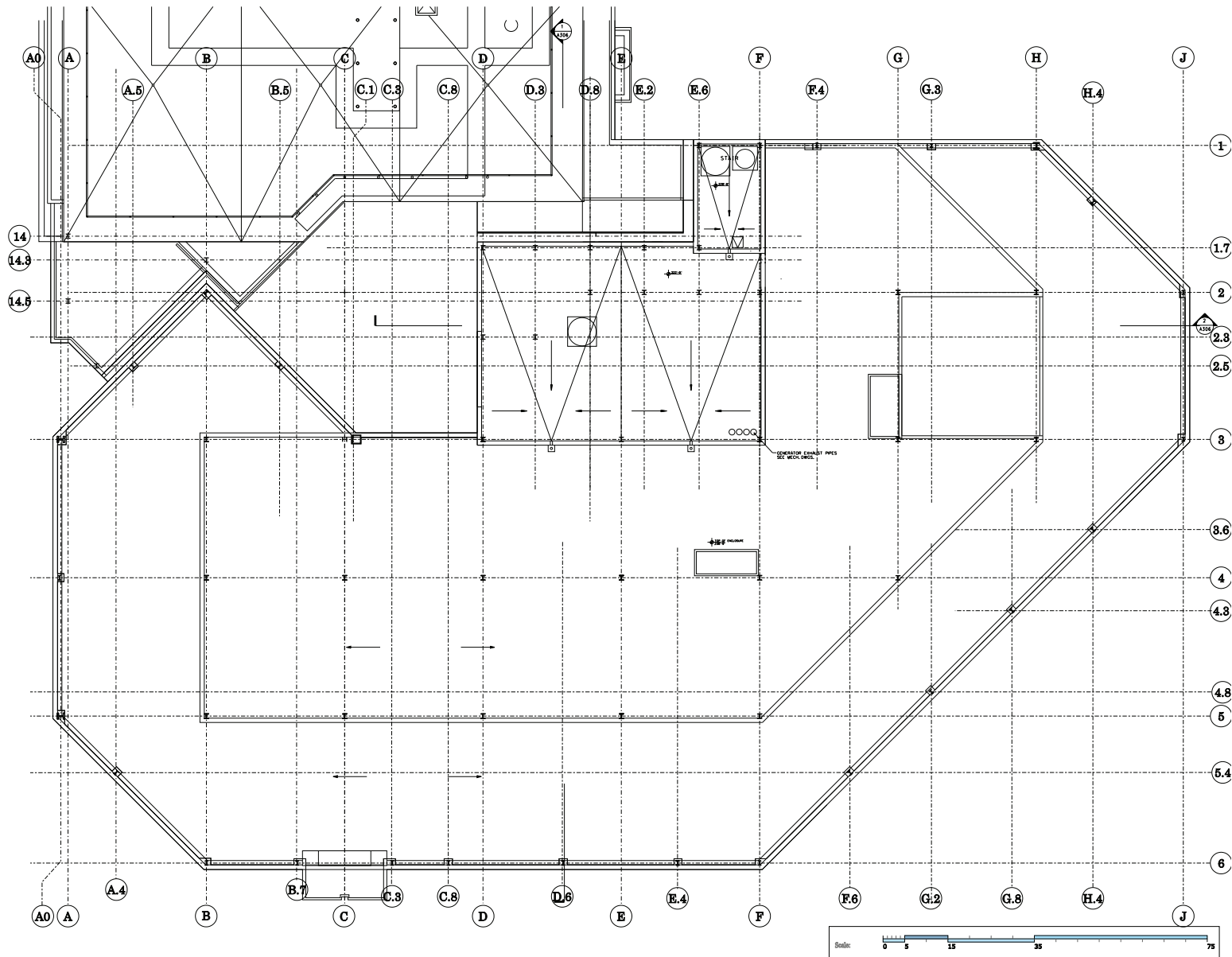
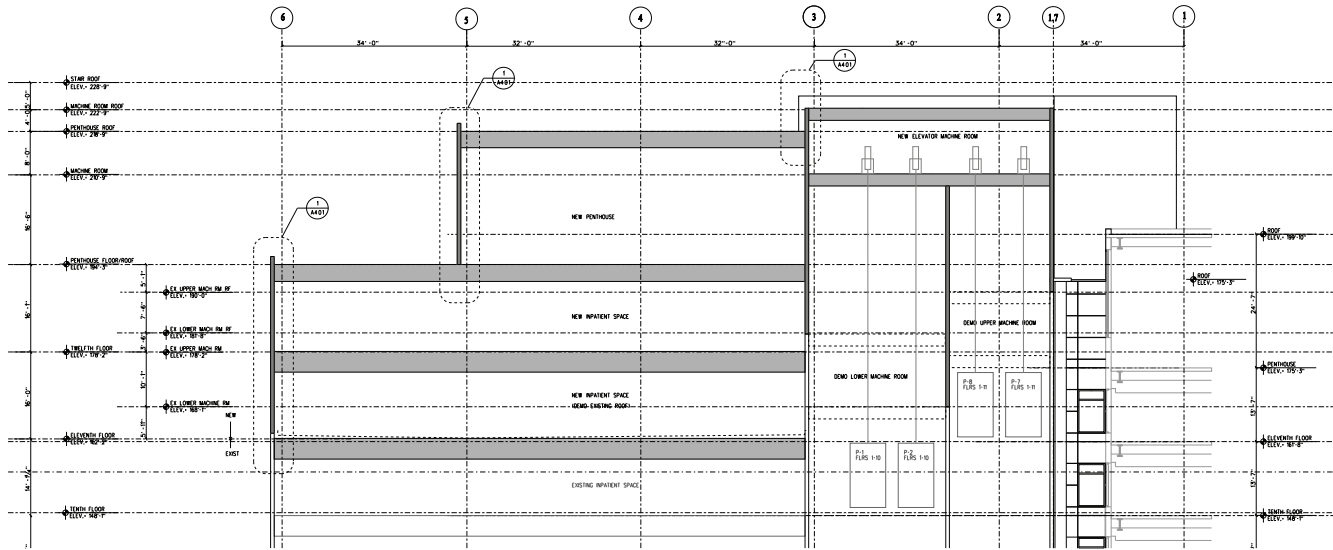
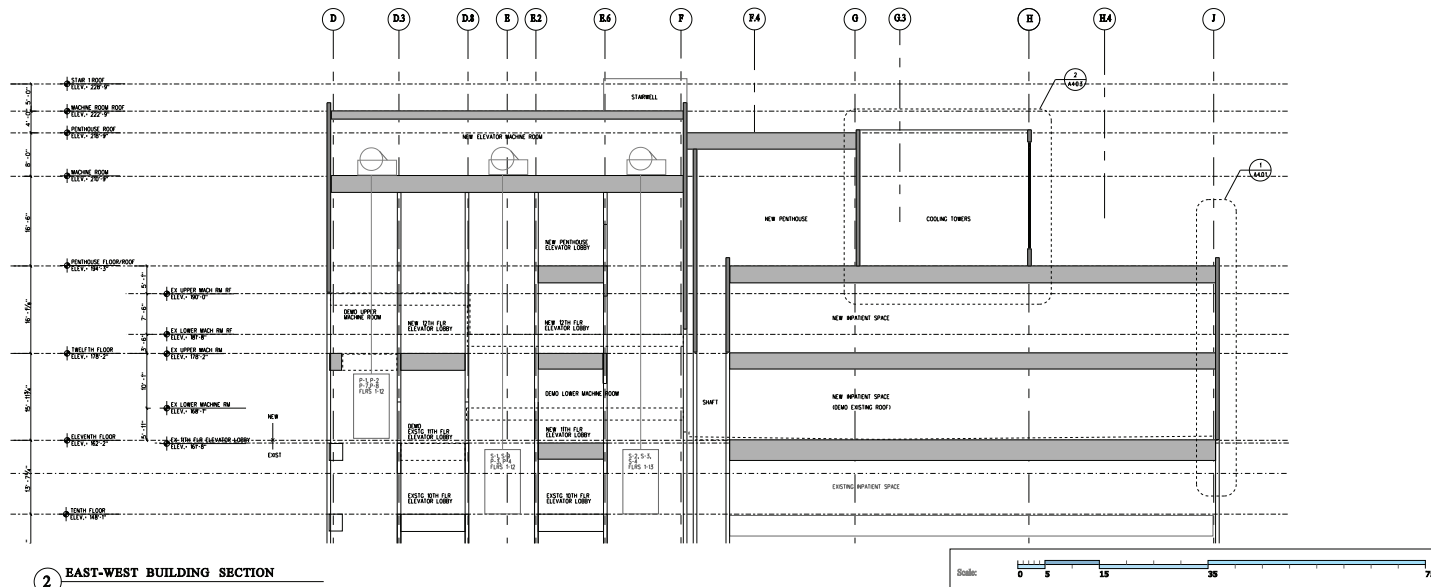


FIGURE 4-12 INPATIENT EXPANSION - MACHINE ROOM ROOF PLAN



1 NORTH-SOUTH BUILDING SECTION



2 EAST-WEST BUILDING SECTION



4.2.2 Ongoing Upgrades to Existing Facilities

Throughout the IMP term, Children's will continue to pursue facility and campus upgrades. Over the past several years, Children's has budgeted between \$4 and \$5 million per year to replace, repair, and upgrade the infrastructure on its campus. This level of investment in infrastructure maintenance is consistent with industry standards suggesting \$2 to \$3 per foot. The next five year's budgeting process includes levels of \$10 million for future campus infrastructure projects. Typical projects include air handler and fan replacements, fire alarm system repairs and upgrades, condensate pipe improvements, electrical switch replacements, waterproofing repair, switch gear upgrades, elevator upgrades, MWRA and wastewater compliance projects, painting, roof replacement and repairs, flooring replacement, pneumatic tube system repairs and upgrades, and similar projects.

Children's is also forecasting a significant amount of capital investment over the coming years for known or anticipated facility improvement projects independent of the infrastructure maintenance projects and the Proposed Projects. In FY 2006, \$17 million was budgeted for backfill renovations in spaces vacated by uses transferred to the new clinical building, Main South, and in spaces vacated due to technology upgrades. For FY 2008 through 2012, Children's is budgeting an average of \$35 million per year to continue the backfill renovations and program shifts, including allowances for new programs and initiatives. Such significant commitment to reinvestment in the hospital's facilities is necessary for Children's to meet its mission of patient care, research, teaching and community service.

Among the hospital's anticipated on-going renovation and additions to existing facilities is the Fegan Elevator Bank – a proposed elevator addition of 1,300 square feet to the Fegan Building that would provide up to four new elevator shafts to improve the movement of patients, visitors and staff around the hospital, in particular between the front entrance and ambulatory care in Fegan.

4.2.3 Urban Design

The LMA is a unique area within the City of Boston. The high concentration of patient care, teaching and research activities located in the LMA creates a distinct environment for vehicular and pedestrian circulation. Many of the pedestrians are in the LMA seeking treatment for a variety of illnesses. A significant subset of pedestrians are physically challenged; Children's pedestrian patients are often toddlers of limited mobility or riding in strollers. The conflict between vehicles and pedestrians, especially at the intersection of Longwood Avenue and Blackfan Circle, contributes to traffic congestion and creates an unsafe environment for the Children's constituency. Most of the hospitals in the LMA are currently connected above the street levels with bridges - existing and proposed.

There is a need to provide separate and sometimes secure circulation routes for people and materials among the hospital buildings. The IMP will create a clear identity and circulation system for patients and visitors arriving at Children's.

4.2.3.1 Project Design

The design objective of the Inpatient Main Building Expansion is to provide the maximum number of inpatient beds by extending the Main building in a manner which visually relates to the existing condition and provides an opportunity for hospital identity with improved way-finding to the hospital.

The two patient-floor extension of the Main tower Building is designed to be approximately 1/3rd of the tower facade in the final condition. This will make the addition proportionally appealing. The horizontality of the addition relates to the horizontal expression of the existing floors. With new requirements for patient room spacing, the fenestration will not be of the same rhythm but will respectfully establish its own rhythm using contemporary materials: such as glass and metal panels.

The existing 'waterfall' element will be extended upward as an expression flush with the new facade and terminating with the Children's Hospital Boston logo, as a way-finding aid to the hospital. Also, way-finding to the hospital will be assisted with a vertical banner running the length of the existing Main tower on the eastern facade, visible from Longwood Avenue.

4.2.3.2 Open Space

As part of the Patient Care Center, which will be the subject of an amendment to this IMP during the second half of the IMP term, it is anticipated that open space amenities will be provided through landscaped green roof areas including a healing garden.

4.2.3.3 Wayfinding

The Main Building Expansion will be designed to take cues from the existing Main Building façade. The Main Building Expansion will aid in the way-finding to the hospital by extending the existing Main Building 'waterfall' element, capped with a hospital logo, along with a vertical banner attached to the Main building façade below – visible from Blackfan Street. In addition, it is anticipated that the PCC, which will be the subject of an amendment to this IMP during the second half of the term of the IMP, will enhance way-finding within the hospital complex and add to the identity of the hospital.

4.2.3.4 Conformance with Interim Guidelines

Chapter 8.0 provides further information on compliance with the Interim Guidelines.

4.2.4 *Future Leased Space*

In addition to construction of the 11th and 12th floor Main Building Expansion Project, CHB expects that its recent trending of clinical and research programmatic expansion will require approximately 150,000 to 250,000 square feet of additional leased space in the LMA (and surrounds), over the ten-year term of the IMP. This would be an incremental expansion, over and beyond the 252,000 gsf “Children’s Brookline Place” development now in its preliminary phases of permitting, to be situated at 2-4 Brookline Place in the Town of Brookline. The additional space(s) will allow for additional clinical and translational research, hospital administration, support services (such as physician billing, training and call centers, etc), information, voice and data systems and other non-clinical uses. This future space is likely to be located in existing buildings or future facilities in the area. Further, periodic preventative maintenance at the Longwood campus, often requires partial shutdown and renovation or upgrade, of programmatic or administrative space (up to, but not in excess 20,000 sf), that would also occur with this ten-year term.

Children's Hospital Boston continues to occupy leased space in facilities outside of Boston, often co-locating in concert with adult health care providers (such as in Peabody, with The Lahey Clinic, or in Weymouth, with South Shore Hospital), and Children’s would anticipate that this strategic expansion will continue throughout the New England region. Extensive numbers of administrative staff and ambulatory care functions have already been moved to facilities in Brookline and Waltham, and the hospital intends to continue to move additional ambulatory and administrative functions in the future. During the past ten years, over 250,000 square feet of space has been relocated off-campus, though most of it is within owned real estate facilities in Waltham. A sizeable community-based clinical program, ‘The Martha Eliot Health Center’, is located in leased space in Jamaica Plain.

From time to time during the term of this IMP, the hospital may lease facilities, including parking facilities, located outside of the IMP area. Such facilities will not require an amendment to this IMP, as long as the Use category of underlying zoning which most closely describes the use of such facility, is either allowed ‘as-of-right’ by underlying zoning in the jurisdiction, or is allowed by zoning relief obtained by the property owner/Landlord. This will give the hospital needed flexibility in meeting its space needs and will also assist in fulfilling the goal of the BRA’s Interim Guidelines to direct new hospital facilities to appropriate locations outside the LMA.

4.2.5 *Schedule*

It is anticipated that construction of the Main Building Expansion will commence mid-2008 and will be completed by early 2011.

4.3 Zoning

4.3.1 *Existing Zoning*

Developments on the Children's Hospital campus to date have been governed by a Development Plan for Planned Development Area No. 29, which was approved by the Boston Redevelopment Authority in 1987 and amended in 1999. The Development Plan for Planned Development Area No. 29 as approved in 1983 related to the core campus south of Longwood Avenue. The 1987 Development Plan described the existing improvements on the south campus as well as included construction of the Enders Research Building Expansion at the corner of Longwood and Binney Street as its primary new project. In 1999, the Development Plan was amended to bring the core campus north of Longwood Avenue into Planned Development Area No. 29. The 1999 amendment described the existing improvements on the north campus and approved as its primary projects the Clinical Building on the south campus and the Karp Research Building and associated 300 new subsurface parking spaces on the north campus.

In 2006, Children's purchased from Lyme Properties a parcel of land on Blackfan Circle which will become part of the north campus, and which is approved under the Development Plan for Planned Development Area No. 61 (Phase 2) for construction of a building to be known as the Longwood Research Institute (previously known as the Longwood North Research Center, or LNRC). The LNRC had originally been included in the Institutional Master Plan for the Beth Israel Deaconess Medical Center.

Finally, in addition to its core campus, in 2001 and 2003 Children's purchased from Beth Israel Deaconess Medical Center the parcels known as One Autumn Street and 21-25 Autumn Street. Although these parcels are no longer part of the Beth Israel Institutional Master Plan, they remain zoned in the BIDMC Institutional District under Article 70. Children's also owns a parcel of land at 819 Beacon Street (a/k/a 809-821 Beacon Street and 5 Maitland Street) which is located in the Audubon Circle Neighborhood District under Article 61 (in part in the Local Convenience Subdistrict and in part in the Multi-Family Residential Subdistrict).

4.3.2 *Current Zoning Description*

4.3.2.1 **Core Campus—PDA No. 29.**

The core campus is located in the H-3-D (with a small portion being B-4-D) Planned Development Area (PDA) overlay district and is governed by Development Plan for Planned Development Area No. 29, originally approved by the Boston Redevelopment Authority on August 13, 1987 and approved by the Boston Zoning Commission on October 27, 1987 as Map Amendment No. 212 (area south of Longwood Avenue). An amendment to the Development Plan for Planned Development Area No. 29 approved by the Boston Redevelopment Authority on December 16, 1999 and approved by the Boston Zoning

Commission on January 26, 2000 as Map Amendment No. 366 expanded the Planned Development Area to include the area north of Longwood Avenue. As a result, zoning regulations applicable to the Children's core campus are those set forth in the Development Plan for PDA No. 29, as amended, which encompasses all existing hospital structures and uses within the area described above, as well as the construction of the Enders Building south of Longwood Avenue (1987), the Clinical Building south of Longwood Avenue (1999), and the Karp Research Building and new subsurface parking spaces north of Longwood Avenue (1999). The area of PDA No. 29 is shown on Figure 4-14.

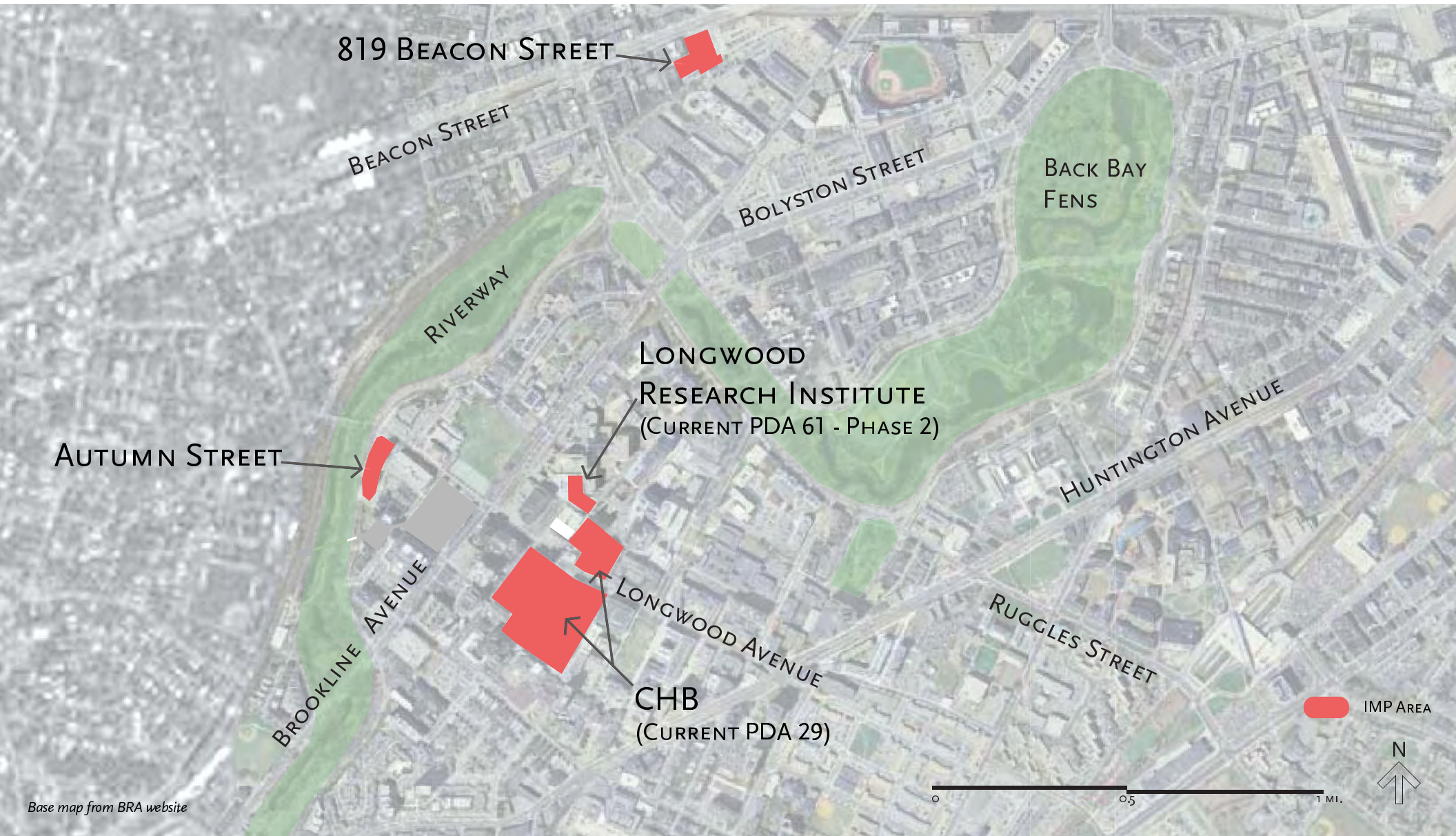
4.3.2.2 Expansion of Core Campus to Include Longwood North Research Center—PDA No. 61 (Phase 2)

In 2006, Children's purchased from Lyme Properties a parcel of land on Blackfan Circle which will become part of the north campus. The parcel is located in the H-3-D Planned Development Area (PDA) overlay district and is governed by Development Plan for Planned Development Area No. 61, originally approved by the Boston Redevelopment Authority on October 7, 2003 and by the Boston Zoning Commission on December 17, 2003 as Map Amendment No. 426, as amended by First Amendment approved by the Boston Redevelopment Authority on June 10, 2004 and approved by the Boston Zoning Commission on June 23, 2004 as Map Amendment No. 434 and as amended by Second Amendment approved by the Boston Redevelopment Authority on July 20, 2006 and by the Boston Zoning Commission on September 6, 2006. As a result, zoning regulations applicable to the proposed Longwood Research Institute (formerly described as the LNRC) to be constructed on the north campus are those set forth in the Development Plan for PDA No. 61, as amended, to the extent it relates to Phase 2. The area of PDA No. 61, Phase 2, is shown on Figure 4-14.

4.3.2.3 Parcels Outside of Core Campus owned by Children's

In addition to its core campus, in 2001 and 2003 Children's purchased from Beth Israel Deaconess Medical Center the parcels known as One Autumn Street and 21-25 Autumn Street. Although these parcels are no longer part of the Beth Israel Institutional Master Plan, they remain zoned in the BIDMC Institutional District under Article 70.

Children's also owns an approximately 61,634 square foot parcel of land known as 819 Beacon Street (which shall be considered a combined parcel including the addresses of 809-821 Beacon Street as well as the address of 5 Maitland Street, which is located in the Audubon Circle Neighborhood District under Article 61 (in part in the Local Convenience Subdistrict and in part in the Multi-Family Residential Subdistrict). The use of this parcel as a 249 space open-air parking lot was approved by the Boston Zoning Board of Approval on January 22m 2008 in BZC Decision No. 28707. The areas of One and 21-25 Autumn Street and of 819 Beacon Street (a/k/a 809-821 Beacon Street and 5 Maitland Street) are shown on Figure 4-14.



Base map from BRA website

4.3.2.4 Restricted Parking District, Institutional Overlay District and Groundwater Conservation Overlay District

The entire Children's campus governed by this IMP located within Boston Proper is also located within the Restricted Parking Overlay District. Accordingly, no off-street parking is required for hospital projects, and any parking that is provided is a conditional use.

The portion of the Children's campus governed by this IMP located north of Longwood Avenue is also located within the Groundwater Conservation Overlay District. Accordingly, Proposed Projects as described in Article 32-4(a) through (c) are conditional uses or structures, and paving or other surfacing of lot area must employ Groundwater-Retaining Paving.

The entire Children's campus governed by this IMP, except 819 Beacon Street (a/k/a 809-821 Beacon Street and 5 Maitland Street), also is located within the Institutional Overlay District.

4.3.3 Description of Future Zoning

4.3.3.1 IMP Uses

Core Campus: All Hospital Uses are allowed in the portion of the IMP Area shown on Figure 4-14. In addition, any uses permitted in the Development Plan for PDA No. 29, as amended, and/or in the Development Plan for PDA No. 61, as amended (Phase 2), are allowed in all locations within the Core Campus. All existing and likely future uses, including retail, restaurant, service, transient residences (such as for families of patients receiving treatment at the Hospital), educational and general and professional office use are also allowed as of right.

One and 21-25 Autumn Street: Office Uses (as defined in Section 2A of the Boston Zoning Code) and research and clinic laboratory uses are allowed at One and 21-25 Autumn Street.

819 Beacon Street: 249 surface parking spaces are allowed at 819 Beacon Street (a/k/a 809-821 Beacon Street and 5 Maitland Street).

4.3.3.2 IMP Dimensional Requirements

Core Campus: Under the Development Plan for PDA No. 29, as amended, the portion of the IMP Area within PDA No. 29 (414,704 SF) was subject to a maximum of 1,698,276 SF¹ of GFA, a maximum building height of 185 feet (the Research Building to the top of the last occupiable floor) and a maximum FAR of 4.1. No front, side or rear yards or parapet setbacks were required, except for a 12' parapet setback for the Research Building on the

¹ This number assumes the demolition of 57 Binney Street containing approximately 7,000 SF. This building will be demolished in connection with construction of the Proposed Project.

Blackfan Circle side. Under the Development Plan for PDA No. 61, as amended, the portion of the IMP Area within PDA No. 61, Phase 2 (46,677 SF), was subject to a maximum of 440,000 SF of GFA, a maximum building height of 298 feet and an FAR of approximately 9.43. Other proposed dimensions were approved as referenced in the Development Plan for PDA No. 61, as amended.

The Proposed Project will include the net addition of 53,375 SF (after demolition of the 7,000 SF Binney Street building) and an increase in the height of a building to approximately 163'-3", measured from a base elevation of 31 feet as required under Article 2A of the Code to the top of the highest occupiable floor. The IMP Area of the Core Campus is 461,381SF. The FAR contemplated for the IMP Area of the Core Campus after construction of the Proposed Project and taking into account the improvements constructed or to be constructed under PDA No. 29, as amended, and PDA No. 61, as amended, Phase 2 (the Longwood Research Institute), or otherwise existing is 4.86 (2,242,735 GSF—including the 1,300 GSF Fegan elevator bank addition—within the 461,381 SF Core Campus IMP Area).

One and 21-25 Autumn Street: The existing structures located at One and 21-25 Autumn Street are approved. No new project is proposed at this location at this time.

819 Beacon Street: The existing structures located at 819 Beacon Street (a/k/a 809-821 Beacon Street and 5 Maitland Street) are approved. No new project is proposed at this location at this time.

4.3.3.3 IMP Parking and Loading

Core Campus: Under the Development Plan for PDA No. 29, 961 parking spaces within PDA No. 29 and a total of 2,307 total owned or leased spaces (which was subject to variation as leases expire and could be renewed, not renewed or replaced) and loading bays were approved as described in the Development Plan, as amended [1987: eight required and 12 provided; 1999: As shown on the Plans].

Under the Development Plan for PDA No. 61, as amended, 348 parking spaces, of which only 330 are to be used by Children's and 18 of which are to be used by the owner of Phase 1 of the PDA (which are replacement spaces for spaces lost in construction), and two loading bays were approved to be available after construction of Phase 2 of PDA No. 61, the Longwood Research Institute. This IMP permits the 454 spaces in the 340 Brookline Avenue Garage (formerly known as the BIDMC East Campus Parking Garage), to be used on an interim basis until commencement of construction of the Longwood Research Institute; a portion of the 454 spaces will likely be leased to BIDMC (and BIDMC and Children's also may agree to swap the location of parking spaces, so that CHB will have use of some spaces in BIDMC facilities and BIDMC will have use of an equivalent number of spaces in CHB facilities).

Parking and loading contemplated for the Core Campus after construction of the Proposed Project and taking into account the improvements constructed or to be constructed under PDA No. 29, as amended, and PDA No. 61, Phase 2 (the Longwood Research Institute) or otherwise to be existing at the end of the term of this IMP is 2,286 parking spaces, nine loading docks, and seven dumpster bays.

819 Beacon Street: 249 surface parking spaces currently exist at 819 Beacon Street (a/k/a 809-821 Beacon Street and 5 Maitland Street).

4.3.3.4 Proposed Zoning Controls

At the time of approval of this IMP, Children's will also seek approval to the Boston Zoning Maps 1 and 1M to eliminate the PDA Overlay Districts for PDA No. 29, as amended, PDA No. 61, as amended, (Phase 2 only), and to create an overlay district known as the Children's Hospital Boston Institutional Master Plan Area. Accordingly, this IMP incorporates by reference the provisions of PDA No. 29, as amended, and PDA No. 61 pertaining to Phase 2, except to the extent modified by this IMP. This area, which is depicted on Figure 4-14, encompasses (a) all of PDA No. 29, (b) Phase 2 of PDA No. 61, and (c) other property owned by Children's or its affiliates located within Boston Proper.

4.3.3.5 Effect of Approval of IMP

Pursuant to Article 80D of the Code, upon approval of this IMP by the BRA and its adoption by the Boston Zoning Commission, uses or structures existing or described in this IMP or Proposed Project(s) will be deemed to be in compliance with the use, dimensional, parking and loading requirements of underlying zoning (including special purpose overlay districts) and may be reconstructed after casualty, notwithstanding any provision of underlying zoning to the contrary and without the requirement of further zoning relief. Such approvals shall apply whether such uses or structures are conducted or occupied by Children's or any other entity, whether for-profit or non-profit, and notwithstanding any requirement that any such entity undertake such uses or occupy such structures pursuant to an Institutional Master Plan.

So long as the existing uses or structures and the Proposed Project(s) are consistent with the provisions of this Institutional Master Plan and the Proposed Project(s) is (are) subject to the Authority design approval process, the existing uses or structures and the Proposed Project(s) may be located on multiple contiguous parcels or lots, whether or not any portion of the existing uses or structures or the Proposed Project(s) on a particular parcel or lot satisfies the provisions of the underlying zoning. Consistent therewith, any yard and setback requirements shall be measured at the exterior property lines of the IMP Area, and shall not apply to any interior lots that may exist or be created within the IMP Area. Height shall be measured to the top of the last occupiable floor. FAR shall be measured with respect to the Core Campus of the IMP Area as a whole, One and 21-25 Autumn Street as a whole, and 819 Beacon Street (a/k/a 809-821 Beacon Street and 5 Maitland Street).

Design Review of Proposed Project(s):

Final plans and specifications for the Proposed Project(s) shall be subject to review and approval by the Authority in accordance with its Development Review Guidelines (2006). The final plans and specifications, as approved by the Authority, shall be deemed to be approved under this Institutional Master Plan.

Future Building Renovation and Maintenance Projects

Throughout the term of this IMP, Children's anticipates conducting ongoing building renovation projects and other campus improvements which may consist of an erection or extension of an Institutional Use but which may be below the threshold for IMP Review or Large Project Review. So long as each such project or improvement is below 20,000 SF GFA, such work may be conducted without amendment of this IMP and the permitted FAR under this IMP shall be deemed adjusted accordingly.

Future Leased or Purchased Space

From time to time during the term of this IMP, Children's may purchase or lease space and parking facilities located outside of the IMP area. Any such facilities, to the extent it exceeds IMP exemption thresholds, will not require an amendment to this IMP as long as the use category of the underlying zoning which most closely described the use of such facility is either allowed as of right by the underlying zoning or is allowed by zoning relief obtained by the property owner. This will give Children's the needed flexibility to meet its space and parking needs.

Future Transfers of Space

During the term of this IMP, it is also possible that Children's will transfer certain property described in this IMP. In such event, Children's may, by written notice to the BRA, elect to remove such property from the IMP and/or IMP Area, whereupon:

- a. such transferred property, to the extent that they do not conform to the underlying zoning, shall be deemed to be lawful prior nonconforming uses and structures; and
- b. remaining uses and structures described in this IMP shall be deemed to be lawful prior nonconforming uses and structures to the extent they do not conform to underlying zoning, notwithstanding the creation of a new lot as a result of such transfer.

Future Reallocation of Certain High Impact Subuses

From time to time during the term of this IMP, Children's may reallocate Gross Floor Area among the various Hospital Subuses, including all High Impact Subuses. Any such reallocation will not require an amendment to this IMP. This will give Children's the needed flexibility to meet its operational needs.

4.4 Campus Vision

Children's is actively planning for its future to ensure that its facilities both on and off campus meet future needs. Over the past two years, the hospital has undertaken an intensive, long-range master planning initiative involving the hospital's trustees and over 30 department chiefs and other hospital leaders. With the input of national health care consultants, this initiative reviewed recent trends in medical treatment, research, and education, future demographics, potential changes in regional health care, and the facility needs of constantly evolving state-of-the-art medical technology and research. In addition the master planning initiative studied existing facility limitations at the hospital's main campus and other locations, in light of these trends.

As previously described, the LMA offers expertise in clinical research combined with care for patients in critical need. This affords opportunities unique for bettering the lives of those children most in need, but also demands that Children's evolves accordingly to meet changing needs. The vision of the hospital is to continue to meet this demand for critical care while maintaining the same quality of care for non-critical cases at its off-campus locations, such as Waltham. While it is difficult to predict the exact need beyond the IMP, it is important to the hospital to continually consider all the best options for its physical evolution concurrent with the most up-to-date and efficient technology in relation to offering the best patient care possible. With that in mind, the vision is to replace or modify existing structures on the campus which are out-of-date with buildings that maintain the needed bed counts and clinical support space – such as radiology and operation rooms. The goal is to design a hospital campus that is cohesive and modern for the staff to work in while being intuitive to navigate and provide comfort for the patients.

During the term of the IMP, Children's also anticipates the development of a Patient Care Center on the site of the Enders Building which will be the subject of an amendment to this IMP. Children's is currently undertaking a planning process to determine its most critical space needs beyond the beds planned for the Main Building Expansion. At this time, it is anticipated that possible uses include inpatient and outpatient beds, ambulatory care services, radiology services, operating room capacity, and support and ancillary services. Current planning allows for a lower level expansion that will tie into the expansion of the first four floors of the Main building allowing the expansion of diagnostic and treatment space (e.g. operating rooms, radiology and laboratories). Parking for 350 vehicles is also contemplated. A new central utility plant is being considered for the basement as well as a

Sanctuary on the roof for patients and their families. At the end of this chapter, Figure 4-15 depicts a vision of the PCC and Figure 4-16 illustrates the potential drop off entrance. The Boston Civic Design Commission has reviewed and approved the footprint, height, and setbacks of the Patient Care Center. The PCC schedule and programming have not been definitively determined. The schedule for the construction of the PCC is contingent upon the relocation of existing research uses in the Enders Building. At this time, Children's envisions shifting research functions from Enders to the Longwood Research Institute (LRI) which is not yet constructed. Given the time needed to construct the LRI and to decant Enders research functions to allow for subsequent demolition of Enders, the construction of the PCC is not likely to occur until the latter half of the IMP term. Therefore, if and when Children's is ready to move forward with the PCC, this IMP will be amended to describe the PCC in detail and set the zoning parameters for the PCC.

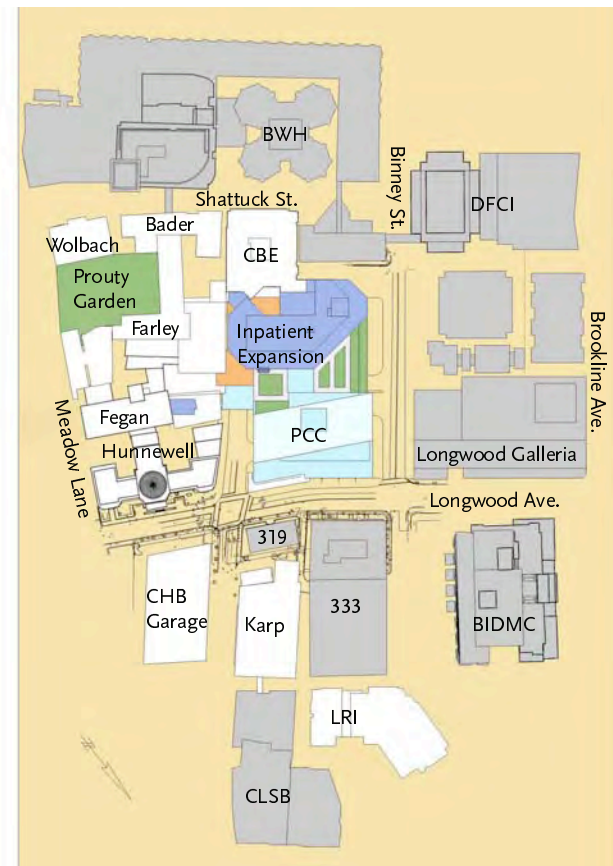
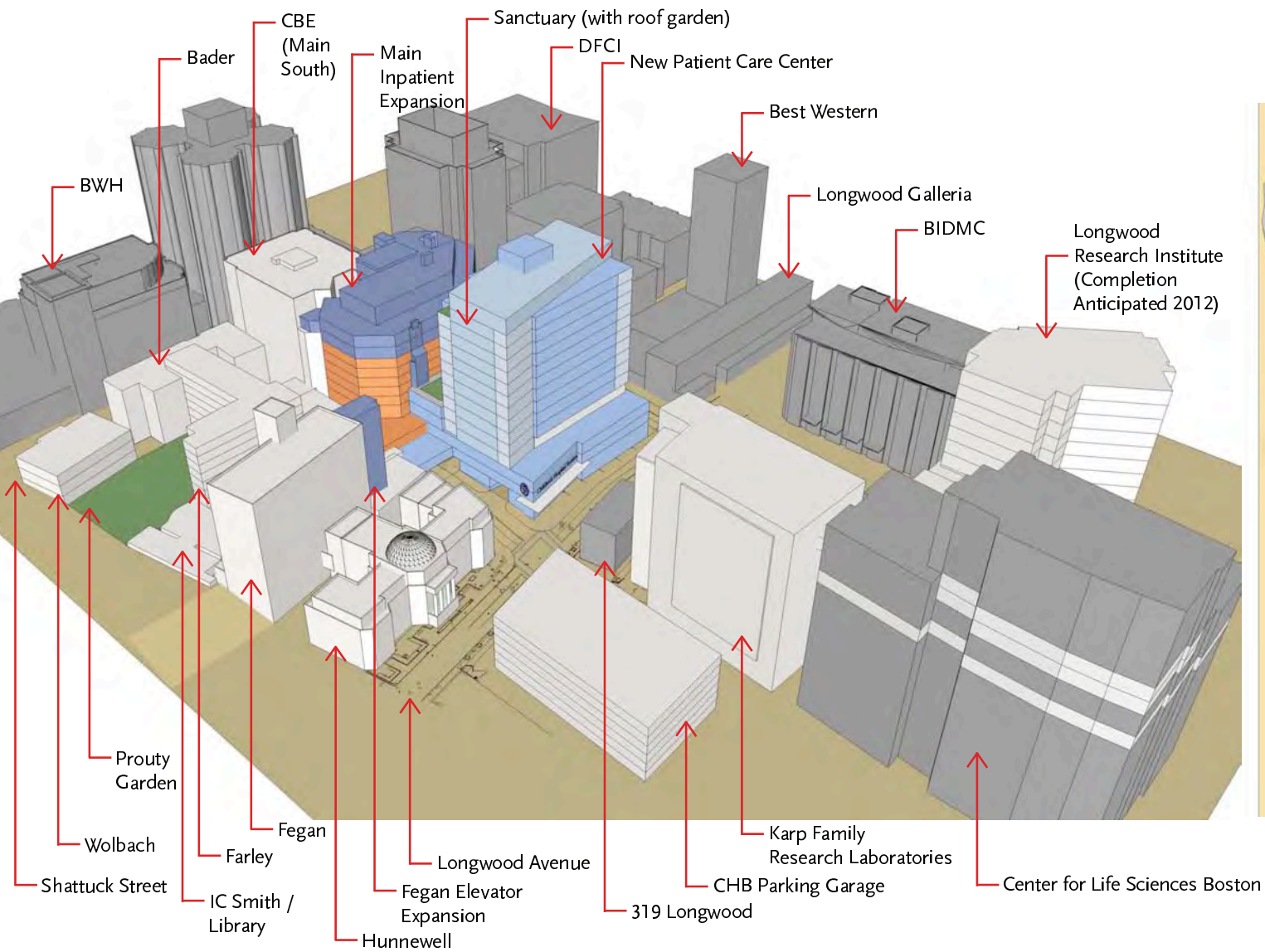
Children's is considering developing the 819 Beacon Street property, located west of Kenmore Square and bound by Beacon Street, Maitland Street, and Munson Street. Development of 819 Beacon Street is not included as a proposed Children's project at this time. If and when the hospital wishes to pursue development of this parcel, the hospital will seek an amendment of the IMP.

The site includes 249 surface parking spaces. These parking spaces are currently used primarily by Children's as a remote parking facility for its staff, nurses, and physicians. The lot is also currently occasionally opened to the public for games or events at Fenway Park.

Children's contemplates a residential building along Beacon Street and an associated parking structure to be located south of the residential building. The building would contain a market rate mix of one and two-bedroom units with an appropriate number of affordable residences. The height, massing, and elevation of the residential building would be consistent with the City's "A Civic Vision for Turnpike Air Rights in Boston" document and with structures on Beacon Street. It is intended to create a transition between lower building heights in the area and higher building heights in the Kenmore Square area.

The parking structure would provide parking for residents of the project and other spaces would be made available to Children's staff, nurses, and physicians to support the hospital's core medical, research and academic activities at its main campus in the LMA. Shuttles would continue to provide service to and from the main campus.

In keeping with recent efforts to expand ambulatory care at facilities outside its main campus, the hospital's long-range strategic plan envisions incremental growth at the Longwood campus over the next 20 years, while planning for much more rapid growth at its facilities outside the LMA.





5.0 TRANSPORTATION COMPONENT

Please see Chapter 2.0 of the Draft PIR for the detailed transportation analysis.

6.0 INFRASTRUCTURE SYSTEMS

6.1 Introduction

This chapter describes the infrastructure systems which service Children's Hospital Boston in the Longwood Medical and Academic Area of Boston. The following utilities are discussed: water, wastewater, stormwater, natural gas, electricity, steam, chilled water, and telecommunications.

A detailed description of Children's requirements for the Main Building Expansion is included Chapter 6.0 of the Draft Project Impact Report, filed under separate cover.

The systems discussed herein include those owned or managed by the Boston Water and Sewer Commission (BWSC), private utility companies, and on-site infrastructure systems.

Section 3.11 of the Draft PIR includes a discussion of the proposed Main Building Expansion sustainable design initiatives which include water conservation and energy-saving measures.

6.2 Water Service

Children's is serviced by the BWSC Southern Low (SL) water system, which provides both domestic and fire protection service to the hospital. The locations of water mains are shown in Figure 6-1. BWSC has the following water mains in the street adjacent to Children's:

- ◆ An 8-inch main in Binney Street;
- ◆ A 12-inch main in Blackfan Circle;
- ◆ An 8-inch and a 12-inch main in Children's Way; and
- ◆ A 12-inch main in Longwood Avenue.

6.3 Sanitary Sewer

Locations of sewer mains are shown on Figure 6-2. Sanitary sewerage from the Children's campus is discharged into the BWSC sanitary sewer system within the adjacent streets:

- ◆ Two 12-inch gravity sewers in Binney Street;
- ◆ A 39 x 41-1/4-inch gravity sewer in Blackfan Circle;
- ◆ A 12-inch gravity sewer in Children's Way; and
- ◆ A 15-inch and 24-inch gravity sewer in Longwood Avenue.

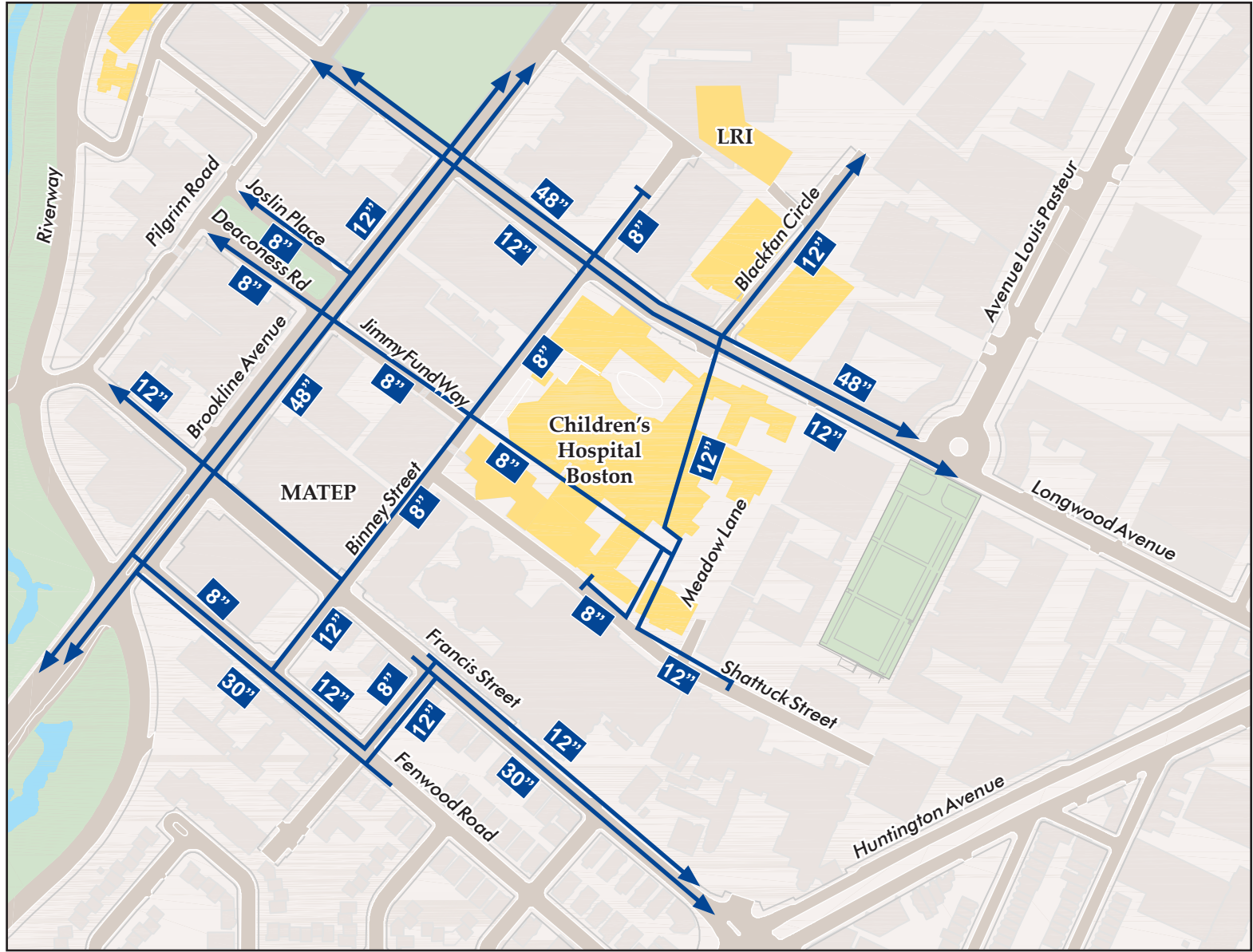


Figure 6-1 Water Infrastructure

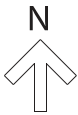
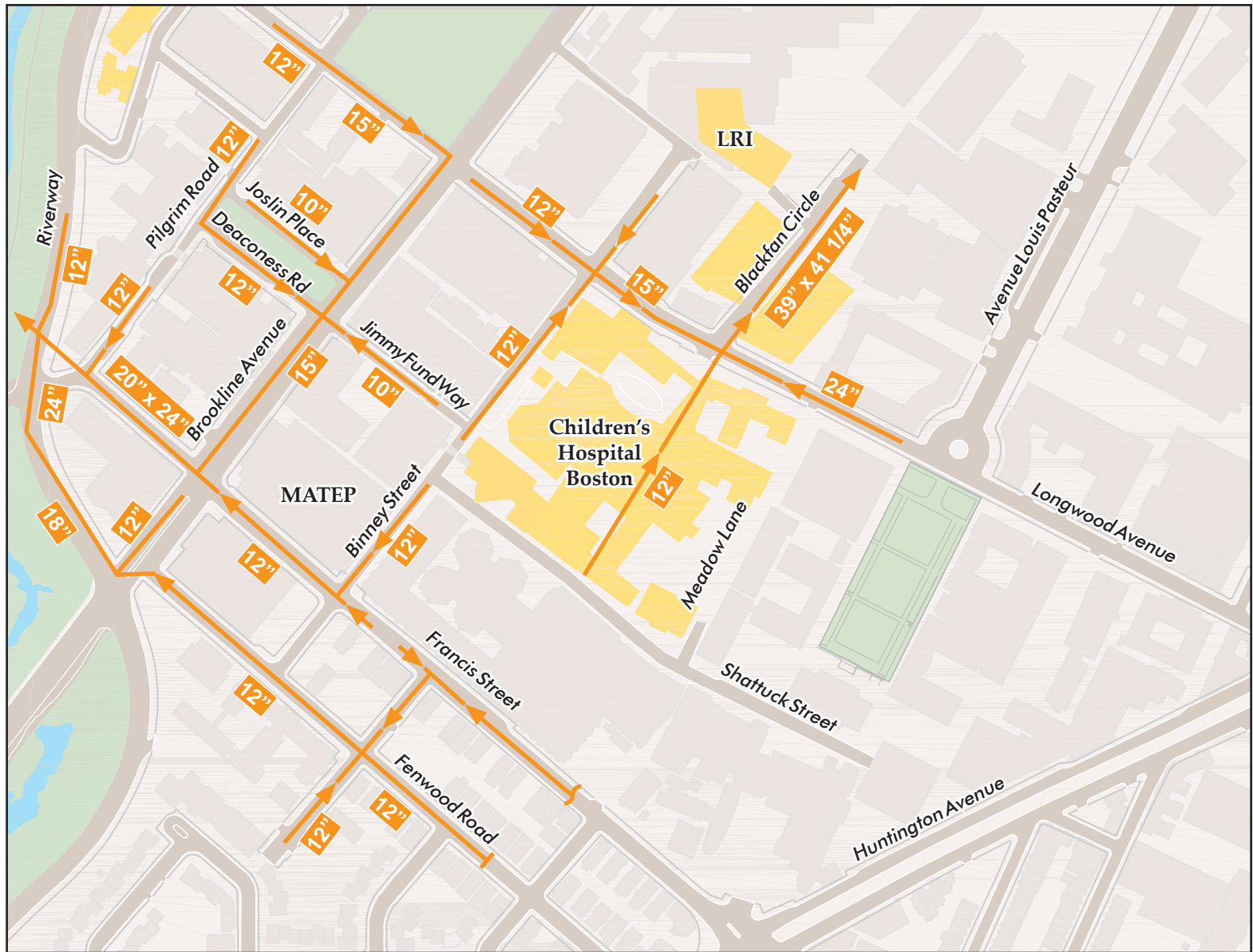


Figure 6-2 Sewer Infrastructure

Sewage initially flows west into Brookline via the BWSC sewage system. Discharged sanitary sewage is conveyed by BWSC and Massachusetts Water Resources Authority (MWRA) sewers to the MWRA Deer Island Waste Water Treatment Plant for treatment and disposal.

6.4 Storm Drainage

Storm drainage from Children's is discharged to the BWSC storm drainage system located in the adjacent streets and the storm drains are shown in Figure 6-3. The following storm drains service the Children's campus:

- ◆ A 12-inch and an 18-inch drain in Binney Street;
- ◆ A 30 x 30-inch drain in Blackfan Circle;
- ◆ A 15-inch drain in Children's Way; and
- ◆ A 15-inch and a 24-inch drain in Longwood Avenue.

6.5 Energy Systems

The Children's campus is provided natural gas by National Grid (formally KeySpan). The natural gas mains are shown in Figure 6-4 and the following are those which service the campus:

- ◆ A 4-inch and a 6-inch gas main in Binney Street;
- ◆ A 6-inch gas main in Shattuck Street; and
- ◆ A 6-inch and an 8-inch gas main in Longwood Ave.

Electricity is provided by NSTAR and the Medical Area Total Energy Plant (MATEP). The electric lines are shown in Figure 6-5, which describe their locations. Steam and chilled water is provided to Children's from MATEP. The location of the steam and chilled water mains are shown in Figure 6-6 and 6-7, respectively. These mains service the Children's campus from Binney and Shattuck Street.

6.6 Telecommunications

Verizon, RCN, and Comcast provide telecommunications infrastructure in the streets adjacent to the Children's campus, including Longwood Avenue, Binney Street, and Jimmy Fund Way. Verizon provides telephone service while RCN and Comcast both provide cable television.

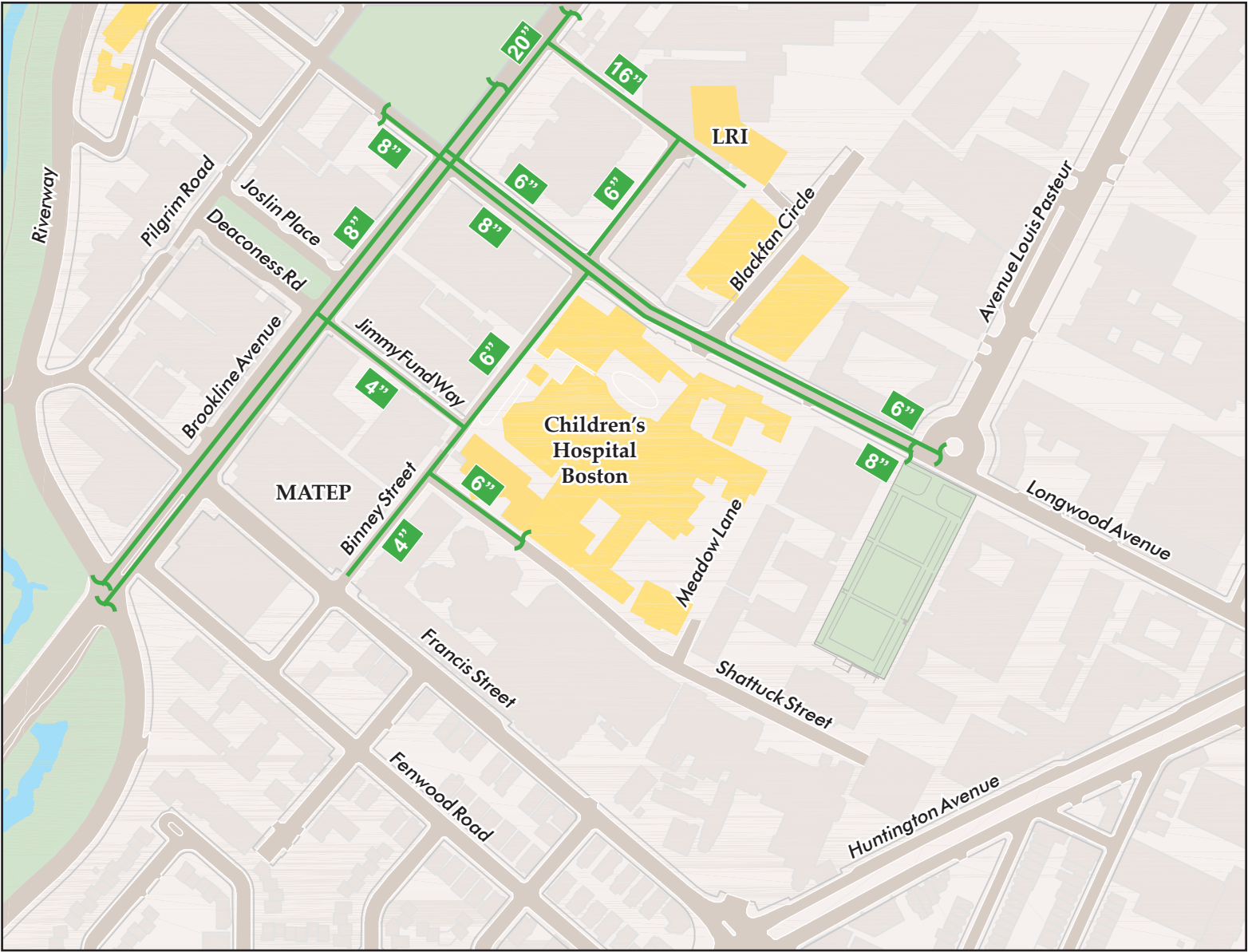


Figure 6-4 Natural Gas Infrastructure

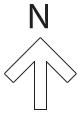
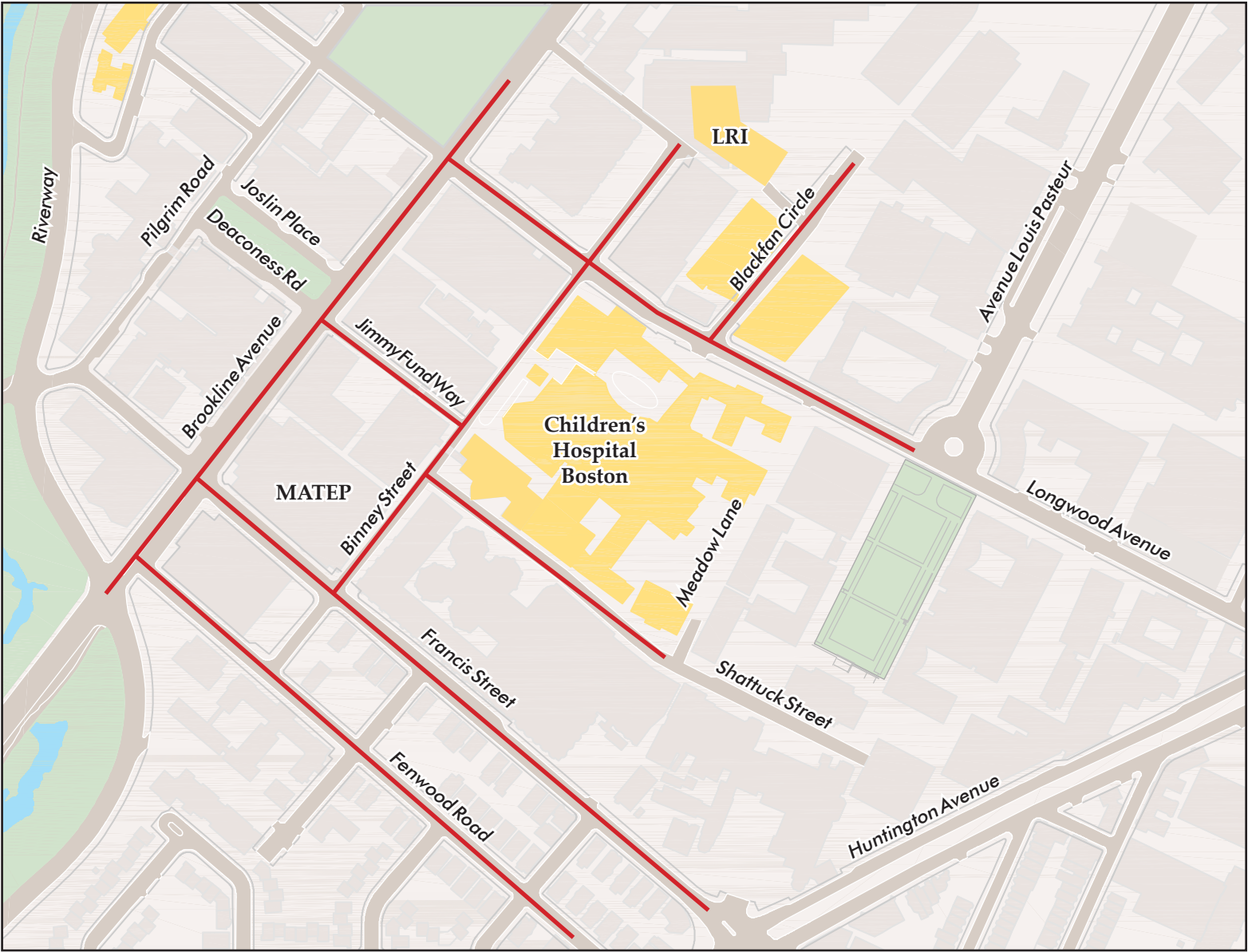


Figure 6-5 Electric Infrastructure

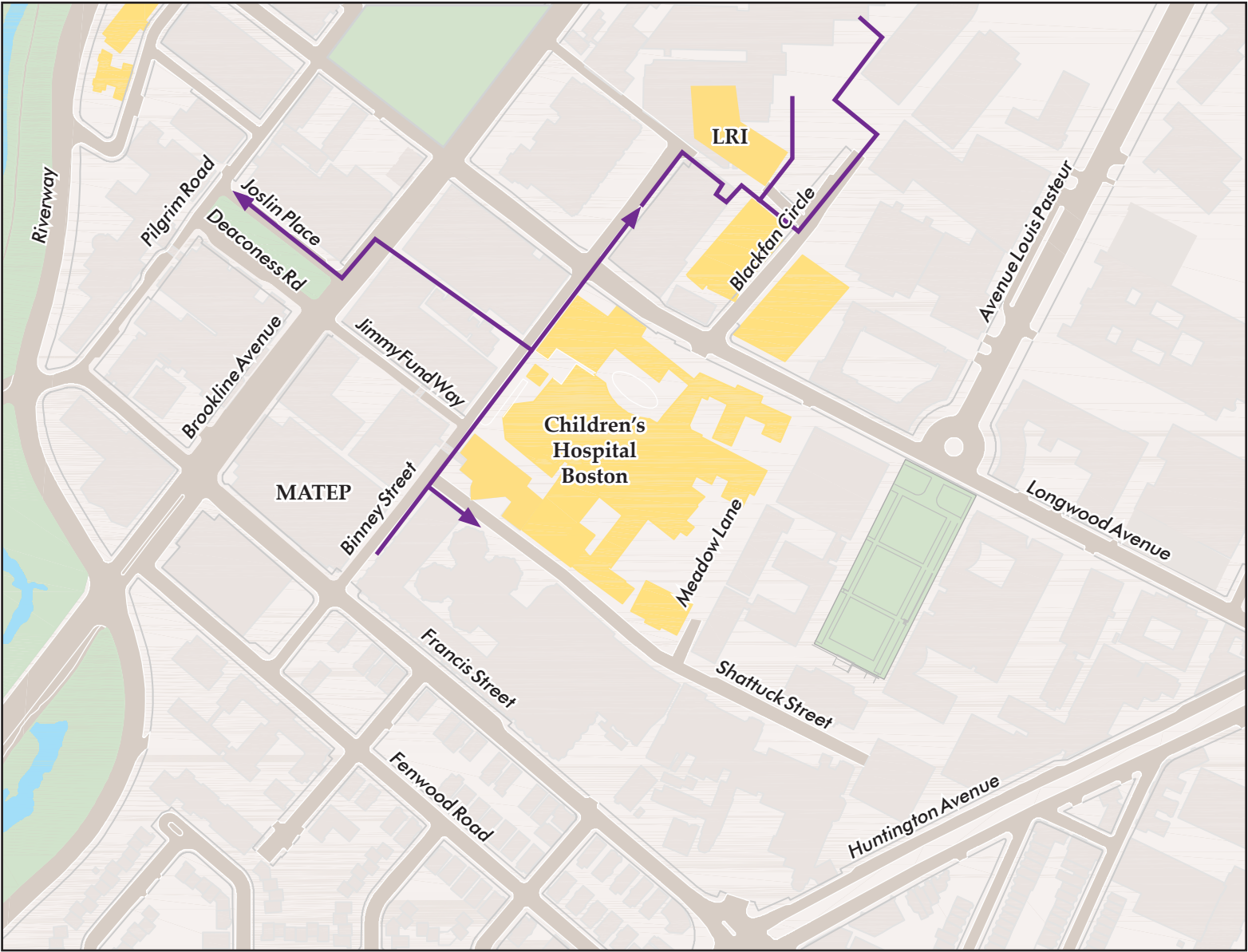


Figure 6-6 Steam Infrastructure

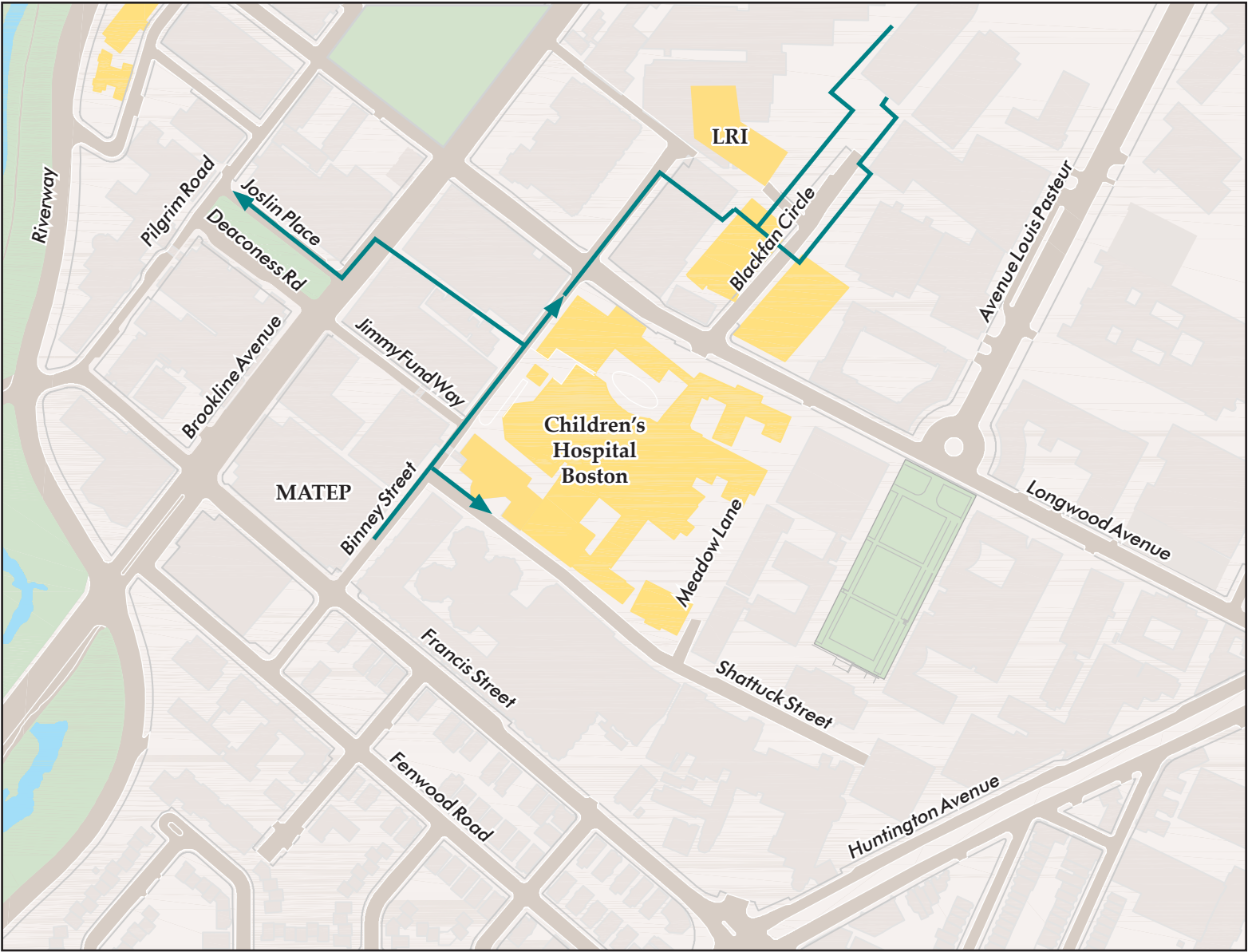


Figure 6-7 Chilled Water Infrastructure

7.0 COMMUNITY BENEFITS

Children's Hospital Boston is the only independent pediatric hospital in Massachusetts - and that singular focus on children and their distinct needs is key to Children's work with and in the local community as well. Children's is known for excellence in patient care, teaching, and research, but promoting community health is also one of the hospital's core missions. The hospital works towards its vision for Boston's children, "Healthy Children. Healthy Communities", on four levels:

- ◆ Serving as the community/safety net hospital for children of Boston.
- ◆ Focusing on the most pressing health care needs.
- ◆ Speaking out as a voice for children.
- ◆ Supporting essential community partners.

In pursuit of this extensive community health vision, the hospital's reach is broad and deep. In FY06, Children's provided an estimated 157,000 patient visits through hospital and community-based clinical services, and reached more than 13,150 children, youth, parents, and caregivers through programs and initiatives in community settings.

7.1 Serving as the Community/Safety Net Hospital for the Children of Boston

Children's is the leading provider of health care to low-income children in Massachusetts. Approximately 30 percent of the hospital's patients are uninsured or have coverage through public insurance. The hospital is committed to being a safety net provider, treating all pediatric patients from Massachusetts regardless of their ability to pay. Children's is also the community hospital for the children of Boston, and is the largest provider of inpatient and outpatient services to these children. More than half of all children hospitalized in the city of Boston come to Children's.

The hospital provides access to primary care services through the Martha Eliot Health Center, the hospital's community health center in Jamaica Plain, the Children's Hospital Primary Care Center (CHPCC), and the Adolescent/Young Adult Medicine Program. These programs provide primary care as well as a wide range of services to address the health and social welfare needs of the patients and families we serve. Children's also is affiliated with eleven of the city's community health centers: Bowdoin Street, Brookside, Dimock, Joseph Smith, Sidney Borum, South Cove, South End, Uphams Corner and Whittier Street. The community health centers are key allies in improving access to care, as well as developing and implementing community health initiatives.

Children's offers other vital, hospital-subsidized services that are either unavailable elsewhere or are only available in very limited capacity, such as mental health services, dental care, and child protection services.

7.2 Focusing on the Most Pressing Health Care Needs: Asthma, Mental Health, Injury Prevention, Fitness and Nutrition

The hospital completed comprehensive need assessments in 2004 and 2006 to direct its community programs to the most pressing health needs impacting children and families in Boston. That input, plus a review of public health data, showed that asthma, mental health, obesity, and prevention of injuries were the most pressing and prevalent health issues for children in Boston.

Asthma

Asthma is the leading cause of hospitalization at Children's. The hospital is the largest provider of clinical services to children with asthma in Massachusetts, with almost 16,000 inpatient and outpatient visits for asthma as a primary or complicating diagnosis in FY06.

Changing these statistics requires an all-out effort, combining patient care, research, training, community health and education, and public policy advocacy all directed toward reducing the burden of this serious chronic, but very manageable, disease. Children's has focused its programs to improve asthma management in a child's everyday life. With supportive resources and education, children with asthma can lead healthy and active lives.

Direct services are provided for inpatients (through the Emergency Department or the Short Stay or Intermediate Care units) and outpatients (through the Primary Care Center, Adolescent Medicine, Pulmonary Clinic, and Allergy/Immunology Department).

The hospital is one of a few "centers of excellence" for asthma **research** in the U.S., having received a \$1.2 million annual NIH grant to establish an Asthma and Allergic Disease Research Center. Immunology research – understanding the immune mechanisms involved in asthma – is a prime focus. Current research projects include studies on the role of certain cells in the effective treatment of asthma and on mouse and dust allergens in the home and in school settings.

In addition to **training** research fellows, the hospital provides ongoing training to medical residents, staff nurses, and school nurses. An asthma clinical nurse specialist teaches residents how to discharge children with asthma medications and how to create asthma action plans, meets monthly with staff nurses for asthma education, and serves as the hospital's nurse consultant for asthma. The hospital offers asthma training to schools and school nurses on request. Thus far in FY06, 40 trainings or presentations were made, reaching more than 750 participants.

In the **community**, Children's asthma programs cover a full continuum of care: prevention, evaluation, treatment, parental support, case management, training and education, and policy advocacy. This approach engages the entire community – families, schools, community health centers, advocacy groups, and community based organizations – and stresses treatment of the child in the context of his or her environment.

The Community Asthma Initiative (CAI) helps children and families improve how they manage asthma. By supporting families with case management, home visits, and asthma education, CAI aims to reduce the number of asthma-related emergency department visits and hospital admissions.

To improve access to asthma education, the hospital was a lead partner and funder of a major asthma awareness campaign, targeted to Boston neighborhoods with particularly high asthma rates. Children's joined with partners WGBH, the Boston Public Health Commission, the Boston Public Library, and the Boston Children's Museum to launch a campaign featuring the popular children's TV program "Arthur." The "Kids with Asthma Can...Asthma Management Campaign" emphasized the three main quality-of-life indicators for children with asthma: playing, sleeping, and learning. The campaign included several elements: a traveling "Buster" play with characters from the show, presented at 80 sites throughout the city; a series of Family Asthma Education Nights held at Boston Public Library branches; educational materials to help children learn about asthma; and a campaign with advertising on buses, trains, and in transportation shelter/information areas in the targeted neighborhoods.

In FY06, Children's provided almost 16,000 asthma-related patient visits in the hospital and reached more than 3,400 children, youth, parents, and caregivers with asthma services and education in community settings.

Mental Health

Children's Hospital Boston is one of the leading providers of mental health services to children in Boston, with more than 14,000 outpatient visits, 800 medical consultations, and 400 inpatient admissions for mental health care in 2006.

Research has shown that mental health programs with comprehensive, integrated, community-based approaches are most effective in preventing such mental health problems as conduct disorder and alcohol and drug abuse. In addition, interventions involving family, school, and community are more likely to be successful than efforts aimed at a single domain. Further, efforts linking outreach and preventive programs run through schools and other community-based settings with clinical services at mental health clinics, community health centers, or school-based health clinic settings have been found to be effective.

All these approaches are evident in Children's comprehensive approach to mental health care, which includes not only direct patient care, but also research, training, community health, and public policy advocacy.

Much of the mental health care provided by the hospital is offered through three **direct-care** departments, all operating integrated and comprehensive services: Psychiatry, Social Work, and Developmental Medicine.

The Department of Psychiatry has a community of **researchers** whose work focuses on neurobehavioral development, mood disorders, attention/conduct disorders, and coping/medical illness. Mental health research is based on the premise that brain, behavior, and environment comprise a dynamic, integrated system in the developing child, and the key to progress is in-depth study, appreciating and then defining the complexity of the developing child.

The hospital provides mental health **training** to clinical providers as well as school and community health center staff on topics such as mental health issues in school, behavioral health issues, violence prevention, pediatric developmental screenings, advocating for patients, psychopharmacology, and how to advocate for public policy changes.

In the **community**, limited access to child mental health services is well-documented and represents a growing problem. Urban children and families in particular have problems with finding and accessing culturally and linguistically appropriate mental health services. These access barriers can be further complicated when care is not provided in a community setting. Children's has recognized this fact and has expanded its mental health services by providing psychiatrists in community health centers and other settings. The hospital also delivers care through prevention and wellness initiatives based in community health centers and schools, and through other community organizations. These initiatives comprise the *Children's Hospital Neighborhood Partnerships (CHNP)*. CHNP works to increase access to mental health services, improve the quality of services available, build capacity in partner organizations, and strengthen the ability of children to function successfully. Mental health initiatives in the community also provide screening, evaluation, education, support services, case management, treatment, and advocacy for children with mental health problems. By integrating and linking these efforts, and by deepening and intensifying the hospital's relationships with community partners, community capacity is strengthened to help Boston's children grow up strong and do well in their daily lives.

Because of the importance of mental health and the difficulty in accessing services, the hospital has developed the only mental health **advocacy** program of its kind in the U.S., the *Child and Adolescent Mental Health Advocacy Initiative (CAMHAI)*. Its goal is to bring about broad change in the mental health system and in mental health services through raising awareness of mental illness and highlighting barriers to care.

In the 2005-06 legislative session Children's actively targeted 10 bills, including supporting a bill to increase mental health benefits, mental health parity law reform, prevention strategies for shaken baby syndrome, and improved evaluations of children who have been sexually traumatized. Through CAMHAI, the hospital also worked toward successful opposition to a bill attempting to limit access to psychotropic drugs.

In addition to prevention and wellness, direct services are offered in four primary care settings in Boston through the *ASK (Advocating Success for Kids) Program*. ASK offers "one-stop-shopping" for access to services for children with medical, emotional, and behavioral issues or school-functioning problems and learning delays. Services include assessments and screenings to determine a child's school and emotional functioning, and development of recommendations for educational and social services. The ASK program also provides extensive follow-up with parents, teachers, and school staff.

In FY06, Children's provided more than 14,000 outpatient visits, 800 medical consultations, and 400 inpatient admissions for mental health care. In addition, Children's provided services to an estimated 3,700 children and youth, 1,900 teachers, school staff and community providers, and 650 parents in school and community settings.

Injury Prevention

Injuries – both unintentional and intentional – are the leading cause of death for children ages 1-19 in Massachusetts and result in 250,000 emergency room visits in a year. Unintentional injury is the leading cause of death for persons ages 1-34, and accounts for approximately 15 percent of medical spending from ages 1-19. Intentional injury or violence to children and young people – everything from physical and sexual abuse to suicide – is an increasingly serious problem, particularly in urban areas.

As part of its 2006 needs assessment effort, Children's Hospital surveyed Boston families to help identify community concerns and gaps in current injury prevention programs. Based on their recommendations and data analysis, the most needed programs today are those that can respond to intentional injury and violence in the city. Children's is addressing prevention of both unintentional and intentional injuries through a comprehensive effort that encompasses direct services, research, training, community health initiatives, education, and public policy advocacy.

Its **direct services** include a Level I trauma center within the hospital's Department of Surgery that ranks in the top 10 pediatric hospitals in the U.S. in terms of volume, the hospital's Division of Emergency Medicine that treats 11,000 injury-related patients each year, a Regional Poison Control Center and Division of Sports Medicine (see below), and other services that treat both unintentional and intentional injuries.

Research efforts include a “Safer Homes” study that is expected to provide new data on injury incidence. Another study, a “Kids in the Back” observation program, is collecting data on children riding in the back seat of cars and those using booster seats, plus adults using safety belts, to provide data for developing an effective intervention.

Training efforts target staff at both Children’s and Martha Eliot Health Center. Staff has been trained in fitting bicycle helmets. A hospital-sponsored course on child and passenger safety is being prepared for staff. Nurses have been trained in testing car seats and Safer Homes home visiting staff have been trained in the intervention.

Advocacy efforts focus on child passenger safety, bicycle and wheeled sports safety, poison control, and child protection, and include work toward enacting a primary seat belt enforcement law, prevention of shaken baby syndrome, and funding for staff training and response to severe physical and sexual traumas.

In the **community**, the hospital’s **unintentional injury** prevention program is carried out through its selection as a site for the *Injury Free Coalition for Kids (IFCK)*, a national childhood injury prevention program of the Robert Wood Johnson Foundation. The Boston program’s goal is to reduce injuries to children under the age of 15 in Jamaica Plain over a four-year period. IFCK has a safer homes program, focused on reducing the risk of injuries from fire, poisoning, and falls; car seat and sports helmet safety programs, both of which involve education and distribution of car seats and sports helmets; and is actively involved in outreach by participating in community health fairs and events.

Children’s also has a strong commitment to help prevent sports-related injuries in children. The hospital’s Division of Sports Medicine provides comprehensive assessment, treatment, and follow-up care to children, adolescents, and young adults with sports-related orthopedic injuries. In addition to providing care at the hospital, the division also brings its resources to the community through the Boston Public Schools (BPS) Sports Medicine Initiative. Staff and orthopedic residents coordinate and supervise medical coverage for BPS sporting events; in 2006, staff contributed more than 100 hours of time at BPS events. The division also has provided medical coverage for a variety of mass-participation sporting events such as the Boston Marathon, the Bay State Games, events at the Reggie Lewis Track and Athletic Center, and other summer sports camps and recreational programs.

A variety of hospital-based programs and community partnerships have been developed to reduce the prevalence of **intentional injuries**, including child abuse and youth violence.

Hospital programs include clinical assessment services for those who have been maltreated, a 24-hour consultation service, and an advocacy program for battered women and their children. The hospital also partners with government agencies and others to prevent and treat children who are at risk or have been neglected or abused. Children’s has provided both clinical and financial support to the Suffolk County Children’s Advocacy Center, which treats children who have been abused.

Children's provided more than \$1 million to support initiatives through the spring and summer of 2006 to promote peace and prevent violence. The funds supported more than 30 community organizations and city government agencies in developing and implementing initiatives designed to engage youth, provide opportunities for training, and offer role models in a positive work environment. These included: access to recreation and youth development opportunities such as camp scholarships for 80 Boston children from the Martha Eliot Health Center and Children's Hospital Primary Care Center; funding renovations at the Melnea Cass Memorial Pool in Roxbury; supporting activities at the BELL Summer Program; funding for 10 community health centers to expand violence prevention or recreation programs; and a series of grants to 12 community organizations for innovative programs such as peace education at a child care center, expansion of recreational opportunities at local YMCA's, and peer leadership programs.

In FY06, Children's provided treatment to an estimated 11,000 injured children through Emergency Medicine, and hospital-based prevention and protection services reached more than 1,700 children. In addition, the hospital reached almost 3,000 children, youth, parents, and caregivers in community settings.

Fitness and Nutrition

Obesity is a complicated medical, social, and lifestyle issue for children, especially children living in urban areas. Children who are struggling with being overweight or who are at risk need access to specialty medical services, nutrition education, and recreational opportunities, which may not always be available in health care settings. Thus, Children's Hospital Boston's approach to this issue is to support and work with community partners who are delivering nutrition education and physical activities.

The hospital's current focus is on working to identify best practices among obesity prevention programs – both hospital-based and in the community – to ensure that its programs are optimally effective in encouraging fitness and nutrition among children and adolescents.

Children's is internationally recognized for its treatment program to help overweight and obese children. The Optimal Weight for Life (OWL) program is the largest pediatric obesity clinic in New England, currently serving more than 700 children annually (one-fourth of whom are from the city of Boston). The OWL clinic is staffed by a multidisciplinary team that includes physicians, nurse practitioners, dietitians, psychologists, social workers, and exercise physiologists – all working to treat children and adolescents who are overweight or obese and those with Type II diabetes. The focus of the program is on healthful eating and a low glycemic index diet, but also includes individualized meal plans and exercise programs, plus behavior modification and group counseling.

This track record, coupled with a focus on local children at risk and strong community connections, makes Children's ideally suited to expand efforts to help prevent and treat these problems, which are reaching epidemic proportions; for example, a recent study showed that 14 percent of toddlers from low income families in Boston are overweight; and in the Boston Public Schools, 25 percent of children are at risk, and another 20 percent are overweight or obese.

The consequences of obesity and lack of fitness can have both short-and long term negative impacts – everything from early onset of cardiovascular disease to diabetes. To reverse this trend, Children's is finding solutions and ways to prevent the problems of obesity on all fronts – through **direct services** such as the OWL program described above and other programs described below, plus research, training, community health, and public policy advocacy.

Obesity-related **research** at Children's spans a range of issues, including nutrition and food consumption patterns, diabetes and health, school programs, eating disorders, and evaluation of community-based programs.

Clinicians are assisted in remaining current through **training** sessions, "shadowing" programs, and conferences.

Improving school nutrition and physical activity are two fitness-and-nutrition related **advocacy** activities. Two bills have been introduced in the state legislature to address these problems.

In the **community**, *One Step Ahead*, a community-focused treatment and prevention program, serves Boston children ages 3-13 by providing evaluations, counseling, and helps to identify and refer them to other nutritional, educational, and recreational resources. At the Martha Eliot Health Center, the *I'm in Charge* program targets young people ages 9-20 who are overweight and at risk for Type II diabetes and provides them with education, clinical care, and access to other community resources.

In addition, the hospital has provided funding to eight hospital-affiliated community health centers with existing fitness and nutrition programs. This funding program, called "Fitness in the City," is aimed at building community capacity to help reduce childhood obesity; and to help identify the best practices to provide obesity prevention services in the community. In addition, the hospital's contribution to the United Way has enabled Children's to support "scholarships" for children to attend *Body by Brandy4Kids*, a Roxbury-based program designed to support physical fitness and healthy living for children at risk for health issues associated with obesity.

Go Kids Boston is an exciting new partnership between UMASS Boston and Children's Hospital Boston. The state of the art facility, located at UMASS Boston, was formed to advance the science and clinical practice of improving physical activity and health in youth.

The primary goal is to provide participants with personalized instruction and support to become more physically active, improve fitness, eat nutritiously, and gain self-confidence. The three focus areas of Go Kids Boston are research, educational training and community outreach.

In FY06, Children's provided hospital-based obesity treatment to 600 children, and reached more than 500 children and youth in community settings.

7.3 Speaking Out As a Voice for Children

Influencing public policy to improve child health is an important aspect of Children's Hospital Boston's commitment to community health. As the leading provider of medical services to low-income children in Massachusetts, and a critical safety net for children throughout New England, Children's recognizes its special obligation to speak out about the crucial needs of children, adolescents, and young adults.

To accomplish this, Children's regards public policy advocacy as a critical component of its overall approach to community health and its focus on providing the full spectrum of care. The hospital has developed comprehensive child health policy advocacy initiatives in its four program areas: asthma, mental health, injury prevention, and fitness and nutrition. Current priorities include ensuring adequate insurance coverage for asthma education, improving school nutrition standards, requiring that physical education be taught in schools, and advocating for mental health parity.

A major focus for Children's advocacy efforts in FY07 will be on mental health. Children's has joined with the Massachusetts Society for the Prevention of Cruelty to Children (MSPCC) to launch a long-term campaign to reform the state's mental health care system. Initial work on the campaign began in FY06 and included the development of the report "Children's Mental Health in the Commonwealth: The Time is Now." This report included recommendations for specific legislative change. Children's and MSPCC also began work with Health Care for All's grassroots group, Children's Health Access Coalition, to help draft the legislation and drive the campaign to advocate for change.

Children's also has been a longstanding leader in improving children's health insurance and has helped drive the effort to expand children's coverage. The hospital has provided critical resources and support to efforts to ensure that policy gains are translated into actual coverage, both by enrolling uninsured children on-site and through community partnerships.

Children's partnered with Community Catalyst to expand these advocacy efforts regionally through the New England Campaign for Children's Health. This is a coalition of key stakeholders in child health from across New England that seeks to advance health care coverage for children at the state and federal level, as well as to enhance the quality of pediatric care.

Children's is dedicated to effecting real change in the lives of children through policy advocacy. To do so, however, it needs the support of Children's staff, medical and public health experts, families, patients, community partners, and others who can be a voice for children. Children's leverages these important voices in its advocacy efforts through the 1,300 member Children's Advocacy Network (CAN). In 2006, Children's developed a program to give 35 CAN advocates a chance to deepen their commitment to advocacy by participating in a special training series to become more effective advocates. The training provided them with the knowledge and skills needed to participate more fully in the policy-making process.

7.4 Supporting Essential Community Partners

Partnerships are a key element in attaining the vision of "Healthy Children. Healthy Communities." because it is a task beyond the reach of any one organization. Achieving this goal requires a concerted and sophisticated effort to integrate and coordinate care. It truly "takes a village to raise a *healthy* child." In addition to its own efforts toward the goal, Children's Hospital actively helps build and support the efforts of the "village," to steward the health of Boston's children, on three levels:

- ◆ by partnering with community health centers, the Boston Public Schools, government agencies, and community-based organizations to address the core commitment areas of asthma, mental health, injury prevention, and fitness and nutrition as well as partnering with community programs aimed at improving child health more broadly;
- ◆ by helping to support the infrastructure for the delivery of health and social services to children and families throughout Boston; and
- ◆ by acknowledging and acting on the hospital's civic role and responsibilities, including support of local organizations that help make Boston a vibrant place to live and work.

Partnerships Aimed at Improving Child Health.

As discussed in the earlier section on the hospital's community health initiatives, the success of the programs is due to the cooperation between hospital staff and its community partners. The hospital's community collaborations, however, extend far beyond the work of its specific community health initiatives. Many of these numerous partnerships affect child health more broadly. The hospital's partnership with community health centers, schools, and the Boston Public Health Commission form the cornerstone of these partnerships.

The hospital maintains strong relationships with the city's community health centers, including its flagship center, the Martha Eliot Health Center, and 11 others. The hospital works with these centers on a variety of treatment, prevention, and health and wellness

programs, including those in the four core commitment areas: the majority of the centers have fitness and nutrition programs; many have school functioning/school preparedness, mental health, and asthma initiatives.

The hospital also works extensively with the Boston Public Schools, offering health and health-related services in 45 schools, with major partnerships forged in 15 schools. Support is provided primarily to improve access to mental health care, including programs such as the Children's Hospital Neighborhood Partnership (CHNP) and Advocating Success for Kids (ASK) program. The hospital also offers asthma education workshops for students and their parents, and provides emergency asthma medication and equipment.

Children's has been an active and financially supportive partner in the Boston Public Health Commission's (BPHC) initiatives with children, adolescents, and young adults, working together on the most pressing public health issues for city children. Children's is currently in year 4 of a six-year commitment to the BPHC's Child and Adolescent Mental Health Coalition, which totals \$300,000. The hospital is also an active participant in the Boston STEPS Initiative and the Asthma Health Project, as described above.

Supporting the Infrastructure for Health and Social Services.

While everyone in the "village" is committed to the stewardship of the health of Boston's children and all serve as an important part of the city's infrastructure to support children and families, Children's Hospital believes it has a responsibility to leverage its resources to help support its partners, particularly those that may be vulnerable, both programmatically and financially.

In addition to providing services in individual schools, the hospital also supports the Boston Public Schools' health infrastructure in a variety of ways. Since 2005, the hospital has invested approximately \$12,000 to offer 250 scholarships to 70 BPS school nurses so that they attend high quality educational sessions at no cost.

Children's has been an active partner and funder of the Mayor's School Readiness Initiative since its inception. It began with Children Hospital's long-standing collaboration with the BPS and the City of Boston on the Countdown to Kindergarten initiative, which engages families, educators and community members in a city-wide effort to celebrate and support the transition into kindergarten - a significant educational and developmental milestone for children and their families. In 2006, Children's built on the foundation of its ongoing relationship with Countdown by making a significant financial contribution to the overall School Readiness Initiative. This support included the hospital providing a paid part-time staff person to the City for six months to conduct research on this subject, as well as funding two years of a new, free playgroup for Boston parents and their young children at the West Zone Early Learning Center. In addition, Sandi Fenwick, the hospital's Chief Operating Officer, joined Jackie Jenkins-Scott in co-chairing the Mayor's Action Planning Team. Children's financial support has been leveraged to attract other sources of public and

private funding. On the occasion of the official Thrive in Five announcement in March, the Hospital pledged an additional \$300,000 to fund the implementation of this plan. This donation will be made to the City and United Way this fiscal year, after approval of the IMP.

Providing both clinical and financial support, the hospital also has a long-term partnership with the Suffolk County Children's Advocacy Center (CAC). The CAC offers abused children access to medical professionals, police officers, the state Department of Social Services, social workers, mental health professionals, prosecutors, victim witness advocates, and domestic violence professionals. This multidisciplinary team works to create comprehensive safety and treatment plans for the children. Children's provides the time of medical professionals (a physician, a social worker, and a psychologist) one day a week to conduct interviews, develop assessments, and compose safety plans. In 2005, the hospital also contributed \$100,000 to support capital costs incurred in the center's incorporation into the new comprehensive Family Justice Center in Brighton, and as such was one of the CAC's biggest supporters of establishing their new home.

In addition to partnerships with city government, community health centers, and schools, Children's provides financial and in-kind contributions to more than 75 local organizations to build community capacity toward improved child health. The hospital is able to seed innovative, community-based programs through its Community Child Health Fund (CCHF) and through providing essential funds to the local Community Health Network Area. Through these two initiatives, the hospital supports community-based based organizations and schools in a wide range of projects ranging from anti-violence to nutrition, from physical activity and exercise to asthma and to substance abuse. CCHF provides a total of \$50,000 annually for projects, based at the hospital, in community health centers, schools, or in community based organizations. CCHF has distributed 66 grants since 2000, for a total of approximately \$370,000. In fiscal year 2006, through various sponsorship and membership opportunities, Children's also provided over \$210,000 to community-based organizations that help support the infrastructure for health in Boston.

Civic Responsibilities

Every institution, whether large or small, private or non-profit, has a responsibility to be involved in its community. As one of the state's largest non-profit employers, Children's Hospital is dedicated to being a "good neighbor" to the local, surrounding communities, as well as working to ensure that Boston on the whole remains strong. Children's has chosen to partner with organizations that share its commitment to maintaining and improving the condition of the Longwood Medical Area and surrounding neighborhoods. As a member of MASCO, the hospital consistently supports energy, infrastructure and traffic improvements in the area. In 2005, Children's also contributed funds to the Audubon Circle Neighborhood Association to support their beautification efforts in the area.

As the only freestanding pediatric hospital in the state, Children's has focused its civic responsibilities on those that serve children and families. For example, since 1996 the hospital has consistently directed its support of the Fenway Community Development Corporation to those efforts that improve the lives of the neighborhood's families through programming.

Other examples of the hospital supporting worthy organizations serving children and youth can be found in another neighboring community, Mission Hill. Part of the Hospital's package of support in regards to our Institutional Master Plan (IMP) and IMP Project includes Children's making a one-time donation of a total of Sixty Thousand Dollars (\$60,000) to the Boston Redevelopment Authority (the Authority), to be distributed to Sociedad Latina to support two of their programs: Youth NOISE and Unique Rhythm. This will provide \$10K per year, per program, for three years. Children's looks forward to being a partner in both of these important initiatives.

Since 1998, Children's Hospital annually has funded the Mission Hill Little League, which has provided recreation and fitness to the neighborhood's children and youth for over 35 years. In 2006, the hospital also supported Sociedad Latina, Mission SAFE, the Mission Hill Youth Collaborative (through the Walk for Health), and the Kevin W. Fitzgerald Park (through the Mission Hill Road Race). The hospital also once again sponsored the Countdown to Kindergarten parade with Mission Hill Main Streets. Financial contributions such as these enable Children's to target its local community support on activities that directly improve the health and quality of life of children and families.

Children's is working to help make Boston vibrant, as well as responsive to the needs of children and families. As discussed earlier, the hospital achieves this by supporting the infrastructure for the delivery of health and social services throughout Boston. At the same time, the hospital helps to assure that low- and middle-income families can remain part of the city – that they have stable employment, career development opportunities, and affordable housing in livable, family-friendly neighborhoods.

7.5 Workforce Development and Training

Children's recognizes that one of the most significant ways that the hospital can support its local community, and ensure that the hospital's workforce reflects the diversity of its patient population, is to recruit and retain Boston residents. To work towards this goal, the Hospital has developed a comprehensive workforce development strategy. These efforts are part of a broader commitment to diversify, retain, and enrich our multicultural staff.

The hospital has created a brand new position in the Human Resources (HR) department called Senior Workforce Development Specialist and has hired a seasoned HR professional to this post. She will lead a multi-disciplinary team at the hospital to further develop and advance the Workforce Development plan at Children's. This will include improved tracking of current activities, as well as exploring new opportunities. One of the hospital's

fundamental workforce development goals is to partner with our community to prepare Boston residents to explore health careers and to enter the health field. In particular, as the only independent pediatric hospital in Massachusetts, Children's Hospital focuses many of our partnerships on those that provide local youth with exploration and experience in the health care field.

To encourage a lasting pipeline of future employees, the hospital recognizes that it needs to help inspire and prepare young people to pursue health careers. Each year, the hospital participates in the Mayor's Summer Jobs Campaign, led by Mayor Menino and the Private Industry Council (PIC), and provides paid summer jobs for Boston high school students in a wide variety of positions. These opportunities offer not just employment for students but also exposure to health care as a possible career track. In FY07, the hospital provided funding for 140 paid summer jobs for youth in Boston. This included 50 students placed in positions at Children's Hospital and the Martha Eliot Health Center, including 26 from the PIC, 15 from Parker Hill/Fenway ABCD, three from Mission Safe, and two each from Codman Academy, Bromley-Heath, and the Hyde Square Task Force.

During the school year, Children's provides other opportunities for local youth to experience health careers first hand. One of these initiatives is the Student Career Opportunity Outreach Program (SCOOP), which inspires high school students to enter nursing through field trips to the hospital, direct nurse-to-student education, shadowing, career advice, and summer internships. SCOOP, which reaches approximately 300 students annually, introduces students to health care careers, specifically nursing, dispels many of the myths or misunderstandings about nursing, and offers students hands on opportunities to work in the health care field. In the 2006-2007 school year, SCOOP nurses worked with the Mission Hill Latina Organization, the Mission Hill Health Movement, Sociedad Latina, the Madison Park High School Advisory Council, and the Health Careers Academy Outreach Collaborative. Since 2003, 57 students have completed SCOOP summer internships, and 15 have continued on in health care - with twelve enrolled in nursing programs, one working as a clinical nursing assistant, one working as a phlebotomy technician, and one working as a surgical technician at Children's Hospital.

For several years, the hospital has also reached approximately 300 local students annually by participating in the Health Education and Career Network (HECN) Expo in Roxbury, periodic job shadowing, and many other career exploration events. Children's Hospital Boston will now have representatives serving on the city-wide Health Careers Advisory Board and HECN Expo planning committee.

Children's also seeks to recruit, and then train and promote, local adults who are interested in health careers. To sustain the hospital's mission of recruiting and retaining employees from the local neighborhoods, Children's Hospital has invested over \$100,000 in a new

employment/recruiting advertising campaign that focuses on Boston. The campaign, which started in late December 2007 and will go throughout 2008, includes:

- ◆ bus wraps on ten buses with routes in the Longwood area and Downtown Boston
- ◆ train posters on the Green, Red, Blue and Orange lines of the MBTA; and
- ◆ a billboard on the corner of Warren and Dudley Streets in Roxbury for the month of January.

The hospital was one of the founding partners of the Boston Health Care and Research Training Institute, which has been a partnership among Longwood Medical Area hospitals, the Fenway CDC, the Jamaica Plain Neighborhood Development Corporation (JPND), Mission Main housing development, and local community colleges. The program provides training opportunities for those looking for employment in health care and to incumbent workers who want to move forward in their careers. As a core partner, Children's provides direct financial support and also has been an active participant. In 2007, the hospital contributed \$75,000. As part of the incumbent worker training component, Children's is consistently one of the leading Training Institute members in annual numbers of participants. In 2006 and 2007, 118 employees, 60% of whom were from Boston, received training, which aims to give employees the necessary skills to advance within their department or to pursue career advancement in other parts of the hospital.

For three years, the hospital has also partnered with Year Up, an intensive training program that provides urban young adults with a unique combination of technical and professional skills, college credits, and paid corporate apprenticeships. In addition to making annual financial donations, Children's has participated by consistently providing information technology and technical support internships (to 16 program participants 2005-2007). This partnership has been positive for both organizations, as evidenced by Children's receiving an appreciation award from Year Up in September 2004 and the fact that the hospital receives high quality staff support through Year Up. Children's has hired several interns after their Year Up graduation as full-time hospital employees.

These examples of programs that specifically serve Boston residents are part of the hospital's overall commitment to training as a means to enrich the staff, as well as to ensure that they have the knowledge and abilities to carry out the missions of the hospital. Every employee of Children's Hospital has the opportunity – indeed the obligation – to keep their skills current. Employees are encouraged by leadership to take advantage of what Children's has to offer for their continuous professional growth and improvement. The hospital's Learning and Development department, as well as many other departments across the institution, provides training opportunities on an ongoing basis. This wide array of training and education programs includes courses in ESOL and GED preparation, career development, basic communications and computer skills, as well as pre-college and college level math and English.

Supervisors/managers have a full curriculum of fundamental and subject-specific workshops such as Front-Line Leadership, Coaching for Effective Performance, Dealing with Challenging Employees, and Delegating Effectively. Courses are also available on-line to accommodate employees who work off-shift and weekends. All employees can also avail themselves of training on Microsoft Office and PeopleSoft applications, workshops on effective communications, creating a respectful work environment, managing their writing, and many more instructor-led and on-line titles. All courses sponsored by Learning and Development are offered on an open enrollment basis, so employees can self-select which would be of greatest interest and benefit to them. In FY07, Children's Hospital employees completed 2,344 Learning and Development trainings. The hospital continuously checks in with key stakeholders from throughout the institution to ensure that the training opportunities are meeting their needs and those of their employees. Each year, new offerings are added to accommodate the organization's growing commitment to ongoing training.

7.6 Employment

Perhaps the benefit that hits closest to home is the sheer number of Boston's citizens who depend on healthcare for their jobs and livelihoods, either directly or indirectly. Children's provides quality, sustainable direct employment to a diverse group of workers who pay taxes to the local government. While direct employment numbers are substantial, the actual extent of the employment impact on the city stemming from Children's Hospital is considerably larger.

Children's Hospital Boston employs approximately 16,000 people at its facilities throughout the greater Boston area. This includes approximately 7,700 employees paid directly from the hospital and over 8,000 "associated personnel" who work, study or volunteer at Children's. Approximately 35% of the associated personnel are from Boston.

According to 2006 year-end data (the last calendar year in which a full data set is available), 2,520, or 33%, of the hospital's 7,713 employees are Boston residents. Over \$107 million was paid to these CHB employees who live in the City of Boston.

Table 7-1 demonstrates that employees who are Boston residents hold a full range of positions at Children's Hospital Boston.

Table 7-1 Boston Resident Employees

| Job Category | Boston Resident Employees | Percent | All CHB Employees | Percent |
|-------------------------|----------------------------------|----------------|--------------------------|----------------|
| Craft Workers (Skilled) | 10 | 0% | 67 | 1% |
| Office and Clerical | 658 | 26% | 1334 | 17% |
| Officials and Managers | 94 | 4% | 456 | 6% |
| Professionals | 1082 | 43% | 4357 | 57% |
| Service Workers | 303 | 12% | 483 | 6% |
| Technicians | 350 | 14% | 935 | 12% |
| Other | 23 | 0% | 81 | 1% |
| TOTAL | 2520 | | 7713 | |

Source: CHB Human Resources; Dec. 31, 2006

Children's Hospital's commitment to employing local residents is also evident in our efforts to comply with the Boston Residents Job Policy (BRJP) of employing a diverse workforce, including Boston residents, for the hospital's construction projects. In 2006, the Boston Employment Commission deemed the hospital's Research Building and Clinical Building construction projects compliant with the BRJP.

The construction of the proposed Main Building Expansion will contribute directly to the local economy by creating an average of 150 construction jobs. A Boston Residents Construction Plan will be submitted in accordance with the Boston Jobs Policy. The plan will provide that Children's will make reasonable good-faith efforts to have at least 50 percent of the total construction worker hours be by Boston residents, at least 25 percent of total construction worker hours be by minorities, and at least 10 percent of the total construction worker hours be by women.

7.7 Additional Economic Benefits

7.7.1 Contributor to Local Economy

The positive economic impact made by Children's Hospital Boston extends far beyond its contribution as a significant local employer.

In May 2007, the Hospital retained the services of Pittsburgh-based research firm Tripp Umbach to provide an in-depth analysis of the business volume, employment, and tax revenue impacts provided by Children's Hospital's operations to the City of Boston. Tripp Umbach is the nation's leading provider of economic impact analysis for teaching hospitals and medical schools, having completed more than 150 similar projects. The full report is available in Appendix C.

Children's Hospital Boston's total business volume (overall) impact is the sum of direct and indirect impacts. The direct impact stems from the in-city spending of the following principal groups: expenditures for capital improvements, and goods and services; the

spending of staff, physicians, residents, and researchers; the spending of out-of-city patients (external to the hospital); and the spending of out-of-city visitors. The indirect impact is derived from these direct, first-round expenditures, which are received as income by businesses and individuals in the city and re-circulated through the economy in successive rounds of re-spending. **During 2006, Children's had an overall business volume impact on the City of Boston of \$533 million.**

A major misconception is that health systems do not generate government revenue. While Children's Hospital Boston is a non-profit institution, the City of Boston still receives substantial revenue as a result of both the direct and indirect influence of this health system. The Tripp Umbach models calculate the indirect revenue benefits accruing to the area based on the business volume generated by the spending of the health system's population. The direct government revenue is the amount paid, or anticipated payment, by the health system entities directly to the government. **In 2006 more than \$27.7 million in city revenue was generated directly and indirectly by Children's Hospital Boston.**

Children's Hospital employees are also dedicated to the cause of helping others. Hospital personnel are among the most generous workers in terms of contributions to local charities and the provision of volunteer services. So, in addition to the hospital's comprehensive commitment to community benefits (described in detail in this chapter of the IMP), **employees, physicians, and researchers at Children's provided approximately \$1.9 million in donations and volunteer services to the residents of Boston in 2006.**

7.7.2 Spin Off Enterprises

In the past year, Children's Hospital Boston has helped launch two new companies: InVivo Therapeutics and Bezoloven Inc.

InVivo Therapeutics was founded based on research from Robert S. Langer Sc.D. of MIT's Langer Lab and Yang (Ted) D. Teng, MD, PhD from Children's Hospital's Neurology Department. Their work focuses on providing novel therapeutic options for treating acute and chronic spinal cord injuries (SCI), and improving the quality of life for people living with SCI conditions.

Bezoloven Inc. was founded based on Michael Shannon, MD's research into new treatments for lead poisoning. Bezoloven will support a clinical trial to determine safety and efficacy of d-penicillamine in the treatment of low-level lead poisoning (approximately 300,000 children in the US have elevated blood lead levels). The study will be performed in the Pediatric Environmental Health Center of Children's Hospital Boston. The primary outcome measure will be the ability of a six-week course of d-penicillamine to produce sustained reductions in blood lead level. If this clinical trial demonstrates safety and efficacy, d-penicillamine will potentially provide another option among the limited

treatment choices for lead-poisoned children. This trial will also provide a basis for examining the drug's efficacy in improving neurodevelopment outcome in children exposed to harmful amounts of lead.

7.7.3 *Linkage*

Under Section 80B-7 of the Boston Zoning Code, projects that require zoning relief and will devote more than 100,000 square feet of space to "development impact uses" must make contributions to the City of Boston's Neighborhood Housing Trust and Neighborhood Jobs Trust. Hospital use, including ambulatory care, is a development impact use triggering these linkage obligations. Children's Hospital has honored the Development Impact Plan executed in 2000 related to the construction of the Karp Family Research Building and the new clinical building, Main South. As such, the construction of these buildings have not only made a positive impact on the hospital's staff, patients, and their families, but the associated linkage payments have enabled Children's to support job and housing creation in Boston as well.

Consistent with its commitment to both the City of Boston at large, and to its surrounding neighborhoods, the hospital has occasionally directed its linkage support to specific local projects, when possible. With the jobs linkage payments for both buildings, the hospital provided a total of \$339,000 to the Boston Health Care and Research Training Institute.

Following in the tradition of decades ago when the hospital invested in Phase 1 of Back of the Hill housing in Mission Hill, the hospital paid \$359,000 of the research building housing linkage to support the development of the Back of the Hill Community Housing Initiatives.

In addition, Children's has made unrestricted contributions to the Neighborhood Housing Trust, including \$229,000 from the research building project and \$842,510 from the clinical building project. The hospital will continue to fulfill its commitment to making linkage payments, and hopes to be able to again direct funds to projects in our directly impacted neighborhoods.

7.7.4 *Voluntary Payments to the City of Boston*

Representatives from Children's Hospital Boston have met with the Assessing Department and are in negotiations regarding voluntary payments to the City of Boston.

8.0 CONSISTENCY WITH LMA INTERIM GUIDELINES

8.1 Introduction

In 2002, the BRA and the Office of Jobs and Community Services (OJCS), in conjunction with the Boston Transportation Department (BTD) initiated a master planning process for the LMA. In 2003, the BRA adopted a set of Interim Guidelines to inform the BRA's considerations while reviewing proposed projects pursuant to Article 80 of the Boston Zoning Code.

The following sections outline the Project's consistency with the Interim Guidelines concerning Urban Design, Transportation, and Workforce Development.

8.2 Overall Relationship to Interim Guidelines

The Interim Guidelines establish a set of design principles and criteria for projects and IMPs in the LMA. These guidelines describe the physical assets of the LMA, outline dimensional objectives (including height zones and setbacks), and describe public benefits that can be provided by project proponents and institutions in order to achieve project heights that are greater than the base heights specified in the Guidelines.

The Inpatient Expansion strives to be consistent with the LMA Interim Guidelines. The project is a two floor (plus mechanical penthouse) addition to the existing Main Building. This building is within the hospital campus and is not situated along any major street of the LMA – causing minimal impact in terms of casting additional shadows and obstructing views.

8.3 Urban Design

The Urban Design section of the Interim Guidelines establishes a set of design principles and criteria for projects in the LMA. The guidelines identify the physical assets of the LMA, outline dimensional objectives, including height zones, setbacks and stepbacks, and describe public benefits that can be provided by project proponents and institutions in order to achieve building heights greater than the specified base heights.

8.3.1 *Protection of Assets / Shadow Criteria*

The Interim Guidelines establish a principle of protecting the physical assets of the LMA, and include restrictions on new shadows on City of Boston parks. The Interim Guidelines state:

“...no project will be approved if it casts any new shadow for more than one hour on March 21st on the Emerald Necklace, Joslin Park or Evans Way Park. This standard is consistent with the most recent shadow restrictions adopted in the City's Municipal Harbor Plan.”

As shown on the shadow graphics provided in the Draft PIR, the Project minimally extends the existing Binney Street, Longwood Avenue, and the Harvard Medical School area. The Project does not cast new shadow onto the Emerald Necklace, Joslin Park or Evans Park Way.

8.3.2 Height Zones

The LMA Interim Guidelines establish the following height zone for the area where the Main Building Expansion is proposed:

- ◆ The third height zone will typically apply to the center of the blocks and will have a base height of 150 feet and a potential maximum height of 205 feet.

The Main Building Expansion is consistent with this guideline. The Main Building Expansion is 163'-3", measured from a base elevation of 31 feet.¹ The mechanical penthouse roof above this floor is less than 1/3rd of the total area of all Main building roofs.

The Project provides the following exceptional benefits to justify the additional height:

- ◆ ***Contributing to and implementing a superior workforce development plan*** – Children's Hospital Boston is committed to implementing a superior workforce development plan, and continually adapting it as needed, in cooperation with our neighbors and the City of Boston. The hospital has created a brand new position in the Human Resources (HR) department called Senior Workforce Development Specialist and has hired a seasoned HR professional to this post. She will lead a multi-disciplinary team at the hospital to further develop and advance the Workforce Development plan at Children's. This will include improved tracking of current activities, as well as exploring new opportunities. One of the hospital's fundamental workforce development goals is to partner with our community to prepare Boston residents to explore health careers and to enter the health field. In particular, as the only independent pediatric hospital in Massachusetts, Children's Hospital focuses many of our partnerships on those that provide local youth with exploration and experience in the health care field.

To sustain the hospital's mission of recruiting and retaining employees from the local neighborhoods, Children's Hospital has a new employment/recruiting advertising campaign that focuses on Boston. The campaign, which started in late December 2007 and will go throughout 2008, includes:

¹ As required under Article 2A of the Boston Zoning Code, the base elevation is set at the average base elevation of the Binney Street sidewalk between Children's Way and the Enders Building (37 feet), but no more than five feet higher than the average elevation of the ground immediately contiguous to the building (26 feet). The mechanical penthouse roof above this floor is less than 1/3rd of the total area of all Main Building roofs, and thus is not included in measurement of height under Section 2A.

- ◆ bus wraps on ten buses with routes in the Longwood area and Downtown Boston
- ◆ train posters on the Green, Red, Blue and Orange lines of the MBTA; and
- ◆ a billboard on the corner of Warren and Dudley Streets in Roxbury for the month of January.

During the spring of 2007, Children's discussed with the City of Boston's Office of Jobs and Community Services the Hospital's new comprehensive summer youth employment initiative, Career Opportunities At Children's Hospital Boston (COACH), as part of the IMP review process. Although the IMP was still in the review process, Children's implemented COACH in the summer of 2007, in an effort to advance the program as early as possible since it was so urgently needed. COACH builds on the Hospital's long-time commitment to summer employment for youth, which had traditionally been to hire teens to fill twenty (20) jobs, to now fully fund fifty (50) 7-week paid jobs for Boston youth at the Hospital and Martha Eliot Health Center. For COACH, which also includes crucial components such as weekly workshops and mentoring, Children's Hospital continues to prioritize its adjacent neighborhoods, and the health-oriented Boston Public Schools, by partnering with Health Careers Academy/Private Industry Council, Parker Hill/Fenway ABCD, and the Hyde Square Task Force.

- ◆ ***Open space*** – The temporary structure at 57 Binney Street will be demolished, and the site will be utilized in connection with the proposed construction of the 11th and 12th floor "Main Building Vertical Bed Expansion". At the time of IMP approval, the Hospital will meet its obligation of investing in open space by making a one-time contribution of One Hundred Thousand Dollars (\$100,000) to the Boston Redevelopment Authority (the Authority) for the support and operation of local parks, to be designated by the Authority. This \$100,000 contribution for the support and operation of local parks replaces and supersedes the provisions in the Cooperation Agreement, dated March 2001, between Children's Hospital Corporation and the Authority regarding demolition of 57 Binney Street and creation of a park at that location.
- ◆ ***Green Design*** – Children's is committed to meeting the City's new standards as it relates to green buildings. Energy conservation measures will be an integral part of the proposed Project. The Main Building Expansion will employ energy and water efficient features for mechanical, electrical, architectural and structural systems, assemblies and materials where possible. The Main Building Expansion will meet the Massachusetts Energy Code. Mechanical and HVAC systems will be installed to the current industry standards and full cooperation with the local utility providers will be maintained during design and construction. Children's will incorporate the *Green Guidelines for Healthcare Construction* (GGHC), sponsored by the American Society of Healthcare Engineering (ASHE), as standards for the Addition. The GGHC is based on the

Leadership in Energy and Environmental Design (LEED) Green Building Rating System™ and is designed to provide the healthcare sector with a self-certifying metric that designers, owners, operators can use to evaluate their progress towards achieving high performance healing environments.

- ◆ ***Exceptional Quality in Design*** – Renowned firms Elkus/Manfredi Architects and Shepley Bulfinch Richardson & Abbott have designed the Main Building Expansion to provide the maximum number of inpatient beds by extending the Main Building in a manner which visually relates to the existing condition and provides an opportunity for hospital identity with improved way-finding to the hospital. The two patient-floor extension of the Main tower is designed to be approximately 1/3rd of the tower facade in the final condition, making the Expansion proportionally appealing. The horizontality of the Expansion relates to the horizontal expression of the existing floors. With new requirements for patient room spacing, the fenestration will not be of the same rhythm but will respectfully establish its own rhythm using contemporary materials: glass and metal panels. The existing 'waterfall' element will be extended upward as an expression flush with the new facade and terminating with the Children's Hospital Boston logo, as a way-finding aid to the hospital. Also, way-finding to the hospital will be assisted with a vertical banner running the length of the existing Main tower on the eastern facade, visible from Longwood Avenue.

Children's existing community benefit activities are described in Chapter 7.0.

8.3.3 Setbacks and Stepbacks

The Interim Guidelines issue the following for setbacks and stepbacks:

- ◆ Setbacks from the curb shall match the most appropriate prevailing setbacks; and
- ◆ "Building mass above the prevailing street wall (potential maximum of 75 feet) must be either 75 feet from the setback line, or, not be visible at street level from the back of the opposite sidewalk."

The Main Building Expansion follows the footprint of the existing Main building, whose façade does not lie on Longwood Avenue. Therefore the Main Building Expansion is consistent with the LMA Guideline for setbacks and stepbacks.

8.3.4 Mix of Uses

The LMA Guidelines call for new development to improve the character, security, and vitality of the LMA by increasing the mix of housing, supporting retail, recreation and community facilities. The Guidelines further encourage the use of ground floor retail and other uses that engage the public.

The Main Building Expansion comprises of two floors of inpatient beds with a mechanical floor to be constructed above the existing Main Building. The vertical expansion of the Main Building does not allow for introduction of new ground floor uses. However, the current ground floor of the Main Building engages the public through its provision of a retail store and coffee shop.

The Patient Care Center, anticipated to be developed during the later half of the term of the IMP under an amendment to this IMP, will focus on an improved lobby on Longwood Avenue, along with added retail functions which engage the pedestrian environment.

8.3.5 Character

The Interim Guidelines state that new projects should “build on and reinforce the distinctive physical, historic, and architectural characteristics of each of the institutions” by addressing simplified wayfinding, improved access and circulation, preservation and enhancement of buildings that contribute to the campus’s history, and limits on the width and spacing of tall building elements.

The Main Building Expansion will be designed to take cues from the existing Main Building façade. The Main Building Expansion will aid in the way-finding to the hospital by extending the existing Main Building ‘waterfall’ element, capped with a hospital logo, along with a vertical banner attached to the Main building façade below – visible from Blackfan Street.

In addition, it is anticipated that the PCC, which will be the subject of an amendment to this IMP during the second half of the term of the IMP, will enhance way-finding within the hospital complex and add to the identity of the hospital.

8.3.6 Special Study Areas

The LMA Guidelines define the Longwood Avenue Corridor as a special study area. The Main Building Expansion is setback from the street and does not fall within any of the special study areas; however, it will be within view from Longwood Avenue.

8.4 Transportation

The Interim Guidelines specify five transportation-related topics that must be addressed by every project in the LMA. These five topics include:

- ◆ Parking Ratios;
- ◆ Transportation Demand Management;
- ◆ Traffic Management;

- ◆ Local Street Network; and
- ◆ System-Wide Transportation Projects.

Children's projects under this IMP provide responses and actions on these issues as described below. These efforts are intended to improve local vehicular circulation, reduce congested conditions and improve pedestrian access in and around the LMA.

8.4.1 Parking Ratios

Children's currently controls approximately 2,042 total off-street parking spaces, with 1,104 parking spaces available for use by its patients and visitors, and 938 parking spaces available for staff and physicians. Approximately 1,023 parking spaces are located off-site in remote parking facilities. The majority of employees that park off-site either walk or use shuttle buses to travel between the hospital and these remote parking facilities.

Additional parking is anticipated with the future construction of the Patient Care Center, but these parking spaces will be intended to serve its patients and visitors only and to provide a sufficient on-campus patient parking supply that is conveniently located where core patient services are offered. No new parking is proposed to accommodate employees.

When Children's Main Building Addition project is completed, its parking ratio within the LMA will decrease from to 1.02 to 0.87.

8.4.2 Transportation Demand Management

Children's is committed to continuing to offer a wide array of Transportation Demand Management (TDM) incentives as a means to reduce single occupant driving and increase use of alternative forms of transportation to access the workplace. Children's actively supports efforts to reduce auto use for employees traveling to the hospital. Many actions to support this goal are actively employed by the hospital today, including the following:

- ◆ Employee Transportation Advisor.
- ◆ Membership in MASCO's CommuteWorks TMA.
- ◆ Full support of MASCO's other on-going transportation initiatives.
- ◆ 50 percent transit pass subsidy for employees.
- ◆ Carpool assistance and incentives.
- ◆ Bicycling/walking incentives and amenities.
- ◆ Location-priced parking (i.e.; offering competitive-rate parking on-campus and subsidized parking off-campus).

- ◆ Telecommuting and compressed workweeks, when feasible.
- ◆ Promotional efforts.

Children's is committed to maintaining its employee transit subsidy at 50 percent through the term of its IMP. Children's will also continue to promote and improve its TDM program to benefit its employees and reduce traffic impacts to roadways and parking facilities within the LMA and nearby neighborhoods.

Shuttle service is an important part of ensuring that off-campus parking and public transportation options are as convenient as possible for employees. However, prompted by concerns expressed by residents of the Fenway, the Hospital reviewed its current shuttle operations to assess overall usage and to determine if any adjustments could be made to lessen the shuttles' impact on the Fenway community. From this process, the Hospital has decided to consolidate and reduce its shuttle service during non-peak hours. These changes, which will have to be continually assessed, will include:

Office Shuttle: The CHB Office Shuttle services 1295 Boylston St, 120 Brookline Ave, and Trilogy Garage with stops at Autumn St and Children's Way. The current schedule has departures every 10 minutes at 1295 Boylston St from 7:40 am to 5:10 pm (6 runs hourly). The proposed change in schedule would reduce departures to every 15 minutes (4 runs hourly) which would reduce overall daily runs from 58 to 39 (19 less runs per day).

Beacon Shuttle: The Beacon Shuttle services the 819 Beacon Lot, 20 Overland, and 120 Brookline Ave. During non-peak hours (9:00 am to 3:00 pm) it departs 819 Beacon Lot every 10 minutes (6 runs per hour). We will reduce the frequency of departures to every 15 minutes during non-peak hours (4 runs per hour). This new schedule will reduce overall daily runs by 12 runs total.

The review done by the Hospital's Parking and Transportation Department found that the **North Station Shuttle**, which only runs during peak hours, is running at capacity and helps to encourage employees to utilize commuter rail service, thus reducing overall traffic throughout the area. So no changes will be made to this service as this time.

Children's will continue to work with MASCO to assess shuttle operations area wide and consolidate services. In the meantime, the Hospital participates in the MASCO All-Ride program, which allows other area institutions (Dana Farber Cancer Institute, Beth Israel Deaconess Medical Center, and Joslin Diabetes Center) to ride on the Beacon Shuttle (from 9am to 3pm) and the Office Shuttle (during all hours of operation). In addition, Children's is part of the program that allows interested community residents to get passes from MASCO so they can ride the MASCO shuttles (except for the M2 Cambridge Shuttle).

8.5 Workforce Development

The Interim Guidelines require institutions and developers to work with the BRA and OJCS to analyze current and future workforce needs and develop a Workforce Development Plan to address those needs. Information on Boston resident employees is requested as part of the workforce plan.

Children's Hospital Boston is committed to implementing a workforce development plan, and continually adapting it as needed, in cooperation with our neighbors and the City of Boston. This is reflected in the fact that consistently over 30% of the Hospital's employees are Boston residents. The Hospital's workforce development goals also are aligned closely with two of the central priorities of the institution: being a "workplace of choice" and ensuring that Children's Hospital staff reflects the rich diversity of our patients. Those goals are:

- *Supporting community partners to prepare Boston residents to explore health careers and enter the health field*
- *Recruiting a qualified and diverse workforce*
- *Retaining and advancing our workforce through skill development and training*

It is particularly on the first piece where Children's Hospital Boston feels it can carve a niche for itself, among other local companies and even other local health institutions – by focusing its efforts on young people. As the only independent pediatric hospital, not just in Boston but in all of Massachusetts, Children's believes it has a unique responsibility and opportunity to provide local youth with experience in the health care field. Through various community partnerships, hospital staff have had the pleasure of meeting many local youth who have expressed an interest in health careers - many of whom find pediatrics particularly appealing, which makes sense, since that has been their experience with the health care system to date and many of them like working with children.

Children's Hospital Boston also prioritizes our adjacent neighborhoods for its workforce development partnerships, most notably with the Health Care Training Institute and Parker Hill/Fenway ABCD. The hospital is also proud to now be part of the Health Careers for Youth (HCY) program at Sociedad Latina, providing internships for HCY youth leaders. This program was chosen as a new partnership because they are known for their high quality youth development initiatives and because a minimum of 50% of their youth are drawn directly from Mission Hill.

Children's Hospital will continue to explore ways to enhance the ability of local residents to secure employment with the hospital and to progress up the career ladder.

Workforce development activities are described in Section 7.5 and Section 7.6.

8.6 Conclusion

The above discussion of LMA Interim Guidelines consistency clearly indicates that the Main Building Expansion is consistent with the Interim Guidelines adopted by the BRA for the LMA. The project fundamentally meets the over-arching purposes and spirit of these guidelines.

APPENDIX A – BRA SCOPING DETERMINATION

MODIFIED SCOPING DETERMINATION FOR THE IMP

BOSTON REDEVELOPMENT AUTHORITY

MODIFIED SCOPING DETERMINATION FOR CHILDREN'S HOSPITAL BOSTON INSTITUTIONAL MASTER PLAN

PREAMBLE

The Children's Hospital Boston's ("Children's") campus is located in the Longwood Medical and Academic Area ("LMA") of Boston, which is situated three miles from downtown and is adjacent to Mission Hill and Fenway residential neighborhoods. The LMA is one of the country's most respected centers of medical and academic institutions, encompassing approximately 210 acres and over 14 million square feet of building floor area. Over 53,000 people either work or study in the LMA (approximately 37,000 employees and approximately 15,000 students) on a typical weekday, and employment figures are projected to grow by 25% within the next decade.

The Children's campus in Boston is comprised of two main properties: 1) the approximately 10.67 acre main campus in the LMA, which includes areas north and south of Longwood Avenue. The parcel south of Longwood Avenue contains approximately eight acres, and is bounded generally by Longwood Avenue, Binney Street, Shattuck Street and Meadow Lane. The parcel north of Longwood Avenue contains approximately 2.67 acres, and includes portions of Blackfan Circle and contains two buildings: the Karp Family Research Laboratories and the Patient and Family Parking Garage, and 2) the 0.9 acre Autumn Street parcel, bounded by Autumn Street, Longwood Avenue, and the Riverway. In addition, Children's has recently purchased the phase 2 site of Planned Development Area #61 which will be the site of the 440,000 square foot

Longwood Research Institute. The parcel is bounded by the Binney Connector to the northwest, Beth Israel Deaconess Medical Center (“BIDMC”) East Campus to the north and east, and South Service Road to the south.

As stated in Section 80D-1 of the Boston Zoning Code (the “Code”), “the purpose of Institutional Master Plan Review is to provide for the well-planned development of Institutional Uses in order to enhance their public service and economic development role in the surrounding neighborhoods.” Under the Code, an Institutional Master Plan (“IMP”) has a dual purpose of meeting the needs of the institution and relating the campus to its context in a positive way. In preparing its IMP and Draft Project Impact Report (“DPIR”), Children’s will need not only to demonstrate an understanding of its future facilities needs but also the context of its campus; identification of all owned, leased and planned space, land uses, physical characteristics, planned changes, resident desires, and applicable public policy. The BRA also seeks to enhance Children’s presence in the City of Boston as an important economic development entity and employer. Care should be taken to respond to the concerns outlined below:

1. The LMA is a dense institutional environment. However, institutions located in the LMA will continue to need to grow if they are to remain an important and healthy sector of the Boston economy. It is important to the City that this growth be accommodated in sustainable ways to lessen the cumulative effects of development and to allow the LMA to remain a viable and accessible center for medial care and education. The LMA has reached a point in its history where transportation infrastructure serving the area is challenged with respect to accommodating additional growth. The BRA seeks to understand the long-term plans of institutions in the LMA, so that necessary growth by institutions can be allowed on a fair and equitable basis. Therefore, the BRA requires 10 year IMPs of all institutions. Institutions will be required to provide updates to the BRA on the status of their IMP and any projects and commitments therein every 2

years on the anniversary of their approval by the Boston Zoning Commission.

2. Attractive residential neighborhoods are viewed by the BRA as being vital to the long-term success of Boston. The LMA sits within the context of the Fenway and Mission Hill neighborhoods. Impacts from institutional project construction, operations and expansion must have minimal negative impacts on the neighborhoods and Children's should take appropriate steps to ensure this.
3. The Mayor has appointed a Task Force to assist and advise the BRA on Children's IMP and Proposed Projects. Children's is requested to provide 2 year regular updates to Task Force members in addition to the BRA.

SUBMISSION REQUIREMENTS

FOR

CHILDREN'S HOSPITAL BOSTON INSTITUTIONAL MASTER PLAN

The Boston Redevelopment Authority (“BRA”) is issuing this Modified Scoping Determination in response to a Notice of Project Change (“NPC”), submitted by Children’s Hospital Boston (“Children’s”) on December 6, 2007. This Modified Scoping Determination replaces the Scoping Determination issued on April 17, 2007, pursuant to Section 80D-1 of the Boston Zoning Code (the “Code”) in response to a Institutional Master Plan Notification Form (“IMPNF”) which was filed by Children’s on January 30, 2007. Notice of the receipt by the BRA of the IMPNF was published in the Boston Herald on January 30, 2007 initiating a public comment period ending on March 2, 2007. At the request of the Children’s Task Force, Children’s extended the comment period to April 2, 2007. In conjunction with the submission of the IMPNF, Children’s also submitted a Project Notification Form (“PNF”) which sought Large Project Review, under Section 80B of the Code, for 2 proposed projects: 1) additional upper level floors as well as lobby and lower level expansion space to be added to the Main Building, and 2) a new Patient Care Center to replace the current Enders Building, for a total increase to the Children’s LMA campus of approximately 129,605 square feet over the ten-year term of the proposed IMP (the “Proposed Projects”). The NPC modified the PNF by removing the new Patient Cancer Center project from the proposal. By the submission of the NPC, Children’s proposes only one (1) project at this time: two additional upper level floors as well as lobby and lower level expansion space to be added to the Main Building (the “Proposed Project”). A separate Modified Scoping Determination for the Proposed Project is being issued contemporaneously with this Modified Scoping Determination for the IMP. After the issuance of this Modified Scoping

Determination, Children's will submit for review a ten-year Institutional Master Plan for its campus.

Pursuant to Section 80D-4.3c of the Code, a scoping session was held on February 13, 2007 with the City's public agencies and to which members of the Task Force were invited and attended. Task Force meetings, where the proposed IMP and Proposed Projects were reviewed and discussed, were held on February 12, 2007 and March 12, 2007. Children's presented its mission, strategic plan and need for additional space at the LMA Forum on April 24, 2006, followed by a presentation on its proposed IMPNF/PNF at the LMA Forum on November 13, 2006 and January 22, 2007. Following the scoping session and based on the BRA's review of public comments and comments from the City's public agencies, the BRA hereby issues its Modified Scoping Determination pursuant to Section 80D-4.3 of the Code. Comments from the City's public agencies, the Task Force and the public, found in Appendix 1, 2, and 3 respectively, are incorporated as a part of this Modified Scoping Determination.

The Modified Scoping Determination sets forth those elements specified in Section 80D-3 of the Code that are required to be included in the Children's IMP. The Modified Scoping Determination requests information required by the BRA for its review of the proposed IMP in connection with the following:

1. Approval of the Children's IMP pursuant to Article 80 and other applicable sections of the Code;
2. Recommendation to the Zoning Commission for approval of the Children's Hospital Boston Institutional Master Plan.

The Children's IMP should be documented in a report of appropriate dimensions and in presentation materials which support the full review of the IMP. Twenty-five copies of the full IMP should be submitted to the BRA. An additional fifty copies should be available for distribution to the Task Force members, LMA

Forum participants, community groups and other interested parties in support of the public review process. The IMP should be uploaded on the Children's website so that it may be viewed electronically. The IMP should be submitted 1) as a stand-alone document, and 2) electronically in the form of CD's. The IMP should reference and/or include information from the Draft Project Impact Report ("DPIR") that is also submitted to the BRA to meet the requirements of Large Project Review for the Proposed Project. The IMP document should include this Modified Scoping Determination and text, maps, plans, and other graphic materials sufficient to clearly communicate the various elements of the IMP. The IMP should include the following elements:

I. CHILDREN'S MISSION AND GOALS

The mission of Children's as it relates to its LMA campus ("Campus") should be described. In this case, Campus refers to the area in or near the LMA where Children's occupies or proposes to occupy buildings, whether owned or leased, that are in such proximity that they share a common impact area and therefore should be the subject of the proposed IMP. The description should articulate the larger, as well as local aspects of the mission. Services to the local community are of particular interest. The population served by Children's and the major programs conducted need to be described. Changes expected in the type or size of the mission components, particularly as they relate to the Proposed Project, should be highlighted. The longer term goals and the expected growth in the number of patients and research needs, at least ten years into the future, should be described. A statement of how the IMP will advance the mission and goals of Children's should be included.

II. PROGRAM NEEDS AND OBJECTIVES

Specific program needs and objectives for the Campus to be addressed in the IMP should be defined in sufficient detail. A description of the analysis which was undertaken to identify the needs and objectives should be summarized. Included in the description should be current and future trends that are impacting

Children's and shaping program objectives. Projection of changes in the patient population, employee population, new or expanded programs, research including National Institute of Health ("NIH") grants, parking, Children's enterprises and spin-off companies and other activities that require space on the Campus and in and outside of the City of Boston in the next 5 to 10 years should be included.

A. Compliance with the Longwood Medical and Academic Area Interim Guidelines

The BRA has formulated a set of Interim Guidelines to govern proposed projects in the LMA. These Guidelines have been established to ensure that projects apply good planning principles in the areas of transportation, urban design, and workforce development. They describe the physical character of the LMA and outline mutually beneficial public benefits that can be provided by project proponents to achieve project heights that are greater than those specified in the Guidelines. Development projects within the LMA must demonstrate compliance with guidelines for building height and setbacks, street networks, building character, environmental impacts, and transportation and workforce development. Included in this section should be an outline of how the Children's IMP components comply with the Interim Guidelines.

III. PHYSICAL NEEDS AND OBJECTIVES

A. Campus

A summary analysis of the Campus should be provided using sufficient text and visual materials. The important physical characteristics and conditions should be mapped and described including buildings, building height and floor area ratio ("FAR"), open space, landscape, pedestrian and vehicular circulation, historic resources, groundwater and other important features. Land use, patterns of use, functional areas, building clusters, landmarks or other historic resources, vistas, open space, view corridors and other environmental features should be delineated and studied. The analysis should identify the existing strengths of the

Campus to be enhanced and the need of the Campus to be addressed in the Children's IMP.

B. Facilities

An inventory and description of the buildings, facilities, and other structures occupied on the Campus and beyond should be provided as required by Section 80D-3.2 of the Code. An updated illustrative Campus plan should be prepared showing the location of each facility. For each building the following information should be provided: total gross floor area, occupancy or use by gross floor area, height in stories and in feet, FAR (for each lot), year built and ownership. Information on parking facilities should include the total number of parking spaces and a breakdown of the number of spaces allocated by used category. Appropriate description of other types of facilities and their use such as infrastructure systems, recreational fields, and places of assembly should be provided.

An analysis of the existing facilities in light of the identified program needs and objectives should be undertaken and documented. Specific facility objectives which are addressed in the IMP should be set out. This section should conclude with a summary of Children's need for additional facilities described by use and floor area projected on an annual basis over the ten-year period of the IMP.

IV. CAMPUS CONTEXT

The immediate area of the Campus around Children's should be inventoried, analyzed and summarized in the IMP. The analysis should include land use, building height and FARs, historic resources, open space, student and employee population, public facilities and a ten-year projection of future growth. The capacity and condition of the infrastructure system that serves the Campus should be documented. The impact of Children's and its proposed expansion on the surrounding area should be discussed. Area residents and businesses should be consulted and their views regarding the IMP should be described.

From this analysis, guidelines should be defined that will shape the IMP so that Children's will relate positively to the area around it.

V. MASTER PLAN

A. Concept Plan

At least one brief alternative concept plan should be prepared and analyzed for Children's with particular attention to areas of the Campus which interface with adjacent neighborhoods, other institutional access ways, public streets, and historic resources. This analysis should address the question of the amount and types of services and facilities to be located on and off the Campus. An analysis providing the rationale for locating uses on-site in the LMA should be provided. Alternate off-site locations outside the LMA for uses that are determined not essential to be located in the LMA should be identified and a strategy for moving these uses off-site should be delineated. Elements of the concept plan should include the following:

1. Definition and description of planning objectives;
2. Illustration and description of a campus development plan;
3. Design concepts which are used should be clarified;
4. Articulation of subareas of the Campus based on use, density, and/or physical features;
5. Definition of design principles which will serve as guidelines for the development of the Campus; and
6. Identification of the pedestrian circulation system and its objectives and guidelines.

The alternative analysis should lead to an explanation of why the proposed plan as defined in the IMP was chosen.

B. Development Program

A description of all the significant physical changes proposed for the ten year IMP time period should be provided at the level of definition required by Section

80D-3.4 of the Code. Included here should be information on the renovation of existing facilities, leased space both on and off the Campus, urban design improvements, and any potential future projects identified in the IMPNF. For those locations which are to gain zoning rights through the IMP, the information required is defined in Section 80D-3.4 of the Code. The impacts of each proposal on the Campus should be discussed at a level of definition appropriate to the IMP and mindful that large projects shall undergo Article 80 Large Project Review when they are implemented. The demolition of any building over 50 years old is subject to the provision of Article 85 of the Zoning Code (Demolition Delay).

1. Buildings

The information required for each new or recycled building project proposed includes the following:

- (a) site location and approximate building footprint;
- (b) square feet of total gross floor are and principal subuses;
- (c) gross floor feet of space that is demolished or occupancy terminated;
- (d) floor area ration (FAR) for each lot;
- (e) building height in approximate feet and stories;
- (f) number of parking spaces;
- (g) current zoning of site;
- (h) total project cost;
- (i) estimated development impact project payments; and
- (j) estimated month and year of construction start and completion.

2. Campus Improvements

Information required for campus improvement projects include the following:

- (a) description;
- (b) location;
- (c) estimated cost; and
- (d) estimated month and year of construction start and completion.

3. Campus Expansion

If Children's has any expansion proposed through lease or purchase, the following information must be provided for each expansion location:

- (a) location;
- (b) gross floor area in square feet broken down by uses proposed by Children's;
- (c) lease period;
- (d) current use;
- (e) current owners;
- (f) current zoning;
- (g) current property assessment and property taxes paid to the city;
- (h) current occupants to be dislocated;
- (i) description of proposed improvements;
- (j) estimated cost; and
- (k) acquisition and improvement schedule.

4. Development Program Context

A series of context drawings should be prepared showing phase-by-phase the proposed developments in their larger surroundings for the Campus, including:

- (a) building heights map;
- (b) an open space plan; and
- (c) an isometric (3-D) drawing showing the general building massing of all buildings in the area.

A study model of the larger neighborhood at a scale of 1"=40'-0" showing the proposed phases in context should be provided.

C. Transportation Plan

The scope of the transportation component of the IMP is included in Appendix

1.

D. Community Benefits Plan

1. Training and Employment Initiatives

Provide a detailed description of Children's current workforce and project future employment needs concerning the IMP and Proposed Projects and any other proposals. There is particular interest in learning about that part of the workforce that is drawn from the adjacent neighborhoods and about programs to recruit, train and promote this population. Comments regarding the workforce development component of the IMP are included in Appendix 1.

2. Taxes

In the context of the IMP process, Children's should meet with the City's Assessing Department to address the concerns expressed in the Assessing Department memo found in Appendix 1.

3. Other benefits

Children's should identify current and future proposed community benefits as well as any other benefits that minimize or mitigate detrimental and adverse impacts on the local community from Children's IMP and Proposed Projects.

E. Urban Design Scope

The IMP shall include a narrative of the Proposed Project's design concept and its relationship to the existing buildings and surrounding environment. In preparing the IMP, Children's shall also address the following issues, providing thorough documentation in text and images.

- (a) Description of site history and a discussion of the project design. Information on the design intent of the building expansion should also be included.
- (b) Consistency with the LMA Interim Guidelines should be described and documented.

(c) Description of short term plans for open spaces created by the demolition of 57 Binney Street. A description of campus wide opportunities for landscaping and greening, upon development of the future Patient Care Center on the 57 Binney Street lot should also be described.

(d) Improved wayfinding should be described as it relates to the Proposed Project and any future projects. Potential wayfinding improvements that could occur with the development of the PCC should also be described.

(d) The urban design component should include plans, and elevations to illustrate the Proposed Project design.

F. PUBLIC NOTICE

Children's 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 to the BRA as required by Section 80A-2. This Notice shall be published within five (5) days after the receipt of the IMP by the BRA. Public comments shall be transmitted to the BRA within sixty (60) days of the publication of this Notice, unless a time extension has been granted by the BRA in accordance with the provisions of Article 80 or to coordinate the Hospital's IMP review with any required Large Project Review.

Following publication of the Notice, Children's shall submit to the BRA a copy of the published Notice together with the date of publication.

SCOPING DETERMINATION FOR THE IMP

April 17, 2007

Charles Weinstein
Vice President, Real Estate and Planning Development
Children's Hospital Boston
300 Longwood Avenue
Boston MA 02115

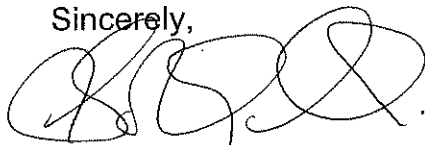
Dear Mr. Weinstein:

Re: Children's Hospital Boston:
Scoping Determinations: Institutional Master Plan and Proposed Projects

Please find enclosed the Scoping Determinations for the Children's Hospital Boston Institutional Master Plan and Proposed Projects. The Scoping Determinations describe information required by the Boston Redevelopment Authority (the "BRA") in response to the Institutional Master Plan Notification Form/Project Notification Form ("IMPNF/PNF") which was submitted under Article 80 of the Boston Zoning Code on January 30, 2007. Additional information may be required during the course of the review of the Children's Hospital Boston Institutional Master Plan and Proposed Projects.

We look forward to working with you and the community to achieve approval of the Institutional Master Plan and Proposed Projects.

Sincerely,



Sonal Gandhi

BOSTON REDEVELOPMENT AUTHORITY

SCOPING DETERMINATION FOR CHILDREN'S HOSPITAL BOSTON INSTITUTIONAL MASTER PLAN

PREAMBLE

The Children's Hospital Boston's ("Children's") campus is located in the Longwood Medical and Academic Area ("LMA") of Boston, which is situated three miles from downtown and is adjacent to Mission Hill and Fenway residential neighborhoods. The LMA is one of the country's most respected centers of medical and academic institutions, encompassing approximately 210 acres and over 14 million square feet of building floor area. Over 53,000 people either work or study in the LMA (approximately 37,000 employees and approximately 15,000 students) on a typical weekday, and employment figures are projected to grow by 25% within the next decade.

The Children's campus in Boston is comprised of two main properties: 1) the approximately 10.67 acre main campus in the LMA, which includes areas north and south of Longwood Avenue. The parcel south of Longwood Avenue contains approximately eight acres, and is bounded generally by Longwood Avenue, Binney Street, Shattuck Street and Meadow Lane. The parcel north of Longwood Avenue contains approximately 2.67 acres, and includes portions of Blackfan Circle and contains two buildings: the Karp Family Research Laboratories and the Patient and Family Parking Garage, and 2) the 0.9 acre Autumn Street parcel, bounded by Autumn Street, Longwood Avenue, and the Riverway. In addition, Children's has recently purchased the phase 2 site of Planned Development Area #61 which will be the site of the 440,000 square foot

Longwood Research Institute. The parcel is bounded by the Binney Connector to the northwest, Beth Israel Deaconess Medical Center (“BIDMC”) East Campus to the north and east, and South Service Road to the south.

As stated in Section 80D-1 of the Boston Zoning Code (the “Code”), “the purpose of Institutional Master Plan Review is to provide for the well-planned development of Institutional Uses in order to enhance their public service and economic development role in the surrounding neighborhoods.” Under the Code, an Institutional Master Plan (“IMP”) has a dual purpose of meeting the needs of the institution and relating the campus to its context in a positive way. In preparing its IMP and Draft Project Impact Report (“DPIR”), Children’s will need not only to demonstrate an understanding of its future facilities needs but also the context of its campus; identification of all owned, leased and planned space, land uses, physical characteristics, planned changes, resident desires, and applicable public policy. The BRA also seeks to enhance Children’s presence in the City of Boston as an important economic development entity and employer. Care should be taken to respond to the concerns outlined below:

1. The LMA is a dense institutional environment. However, institutions located in the LMA will continue to need to grow if they are to remain an important and healthy sector of the Boston economy. It is important to the City that this growth be accommodated in sustainable ways to lessen the cumulative effects of development and to allow the LMA to remain a viable and accessible center for medial care and education. The LMA has reached a point in its history where transportation infrastructure serving the area is challenged with respect to accommodating additional growth. The BRA seeks to understand the long-term plans of institutions in the LMA, so that necessary growth by institutions can be allowed on a fair and equitable basis. Therefore, the BRA requires 10 year IMPs of all institutions. Institutions will be required to provide updates to the BRA on the status of their IMP and any projects and commitments therein every 2

years on the anniversary of their approval by the Boston Zoning Commission.

2. Attractive residential neighborhoods are viewed by the BRA as being vital to the long-term success of Boston. The LMA sits within the context of the Fenway and Mission Hill neighborhoods. Impacts from institutional project construction, operations and expansion must have minimal negative impacts on the neighborhoods and Children's should take appropriate steps to ensure this.

3. The Mayor has appointed a Task Force to assist and advise the BRA on Children's IMP and Proposed Projects. Children's is requested to provide 2 year regular updates to Task Force members in addition to the BRA.

SUBMISSION REQUIREMENTS

FOR

CHILDREN'S HOSPITAL BOSTON INSTITUTIONAL MASTER PLAN

The Boston Redevelopment Authority ("BRA") is issuing this Scoping Determination pursuant to Section 80D-1 of the Boston Zoning Code (the "Code"). On January 30, 2007, Children's Hospital Boston ("Children's") filed an Institutional Master Plan Notification Form ("IMPINF") with the BRA. Notice of the receipt by the BRA of the IMPINF was published in the Boston Herald on January 30, 2007 initiating a public comment period ending on March 2, 2007. At the request of the Children's Task Force, Children's extended the comment period to April 2, 2007. In conjunction with the submission of the IMPINF, Children's also submitted a Project Notification Form ("PNF") which seeks Large Project Review, under Section 80B of the Code, for 2 proposed projects: 1) additional upper level floors as well as lobby and lower level expansion space to be added to the Main Building, and 2) a new Patient Care Center to replace the current Enders Building, for a total increase to the Children's LMA campus of approximately 129,605 square feet over the ten-year term of the proposed IMP (the "Proposed Projects"). A separate Scoping Determination for the Proposed Projects is being issued contemporaneously with this Scoping Determination for the IMP. After the issuance of this Scoping Determination, Children's will submit for review a ten-year Institutional Master Plan for its campus.

Pursuant to Section 80D-4.3c of the Code, a scoping session was held on February 13, 2007 with the City's public agencies and to which members of the Task Force were invited and attended. Task Force meetings, where the proposed IMP and Proposed Projects were reviewed and discussed, were held on February 12, 2007 and March 12, 2007. Children's presented its mission,

strategic plan and need for additional space at the LMA Forum on April 24, 2006, followed by a presentation on its proposed IMPNF/PNF at the LMA Forum on November 13, 2006 and January 22, 2007. Following the scoping session and based on the BRA's review of public comments and comments from the City's public agencies, the BRA hereby issues its Scoping Determination pursuant to Section 80D-4.3 of the Code. Comments from the City's public agencies, the Task Force and the public, found in Appendix 1, 2, and 3 respectively, are incorporated as a part of this Scoping Determination.

The Scoping Determination sets forth those elements specified in Section 80D-3 of the Code that are required to be included in the Children's IMP. The Scoping Determination requests information required by the BRA for its review of the proposed IMP in connection with the following:

1. Approval of the Children's IMP pursuant to Article 80 and other applicable sections of the Code;
2. Recommendation to the Zoning Commission for approval of the Children's Hospital Boston Institutional Master Plan.

The Children's IMP should be documented in a report of appropriate dimensions and in presentation materials which support the full review of the IMP. Twenty-five copies of the full IMP should be submitted to the BRA. An additional fifty copies should be available for distribution to the Task Force members, LMA Forum participants, community groups and other interested parties in support of the public review process. The IMP should be uploaded on the Children's website so that it may be viewed electronically. The IMP should be submitted 1) as a stand-alone document, and 2) electronically in the form of CD's. The IMP should reference and/or include information from the Draft Project Impact Report ("DPIR") that is also submitted to the BRA to meet the requirements of Large Project Review for the Proposed Projects. The IMP document should include this Scoping Determination and text, maps, plans, and other graphic materials

sufficient to clearly communicate the various elements of the IMP. The IMP should include the following elements:

I. CHILDREN'S MISSION AND GOALS

The mission of Children's as it relates to its LMA campus ("Campus") should be described. In this case, Campus refers to the area in or near the LMA where Children's occupies or proposes to occupy buildings, whether owned or leased, that are in such proximity that they share a common impact area and therefore should be the subject of the proposed IMP. The description should articulate the larger, as well as local aspects of the mission. Services to the local community are of particular interest. The population served by Children's and the major programs conducted need to be described. Changes expected in the type or size of the mission components, particularly as they relate to the Proposed Projects, should be highlighted. The longer term goals and the expected growth in the number of patients and research needs, at least ten years into the future, should be described. A statement of how the IMP will advance the mission and goals of Children's should be included.

II. PROGRAM NEEDS AND OBJECTIVES

Specific program needs and objectives for the Campus to be addressed in the IMP should be defined in sufficient detail. A description of the analysis which was undertaken to identify the needs and objectives should be summarized. Included in the description should be current and future trends that are impacting Children's and shaping program objectives. Projection of changes in the patient population, employee population, new or expanded programs, research including National Institute of Health ("NIH") grants, parking, Children's enterprises and spin-off companies and other activities that require space on the Campus and in and outside of the City of Boston in the next 5 to 10 years should be included.

A. Compliance with the Longwood Medical and Academic Area Interim Guidelines

The BRA has formulated a set of Interim Guidelines to govern proposed projects in the LMA. These Guidelines have been established to ensure that projects apply good planning principles in the areas of transportation, urban design, and workforce development. They describe the physical character of the LMA and outline mutually beneficial public benefits that can be provided by project proponents to achieve project heights that are greater than those specified in the Guidelines. Development projects within the LMA must demonstrate compliance with guidelines for building height and setbacks, street networks, building character, environmental impacts, and transportation and workforce development. Included in this section should be an outline of how the Children's IMP components comply with the Interim Guidelines.

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A. Campus

A summary analysis of the Campus should be provided using sufficient text and visual materials. The important physical characteristics and conditions should be mapped and described including buildings, building height and floor area ratio ("FAR"), open space, landscape, pedestrian and vehicular circulation, historic resources, groundwater and other important features. Land use, patterns of use, functional areas, building clusters, landmarks or other historic resources, vistas, open space, view corridors and other environmental features should be delineated and studied. The analysis should identify the existing strengths of the Campus to be enhanced and the need of the Campus to be addressed in the Children's IMP.

B. Facilities

An inventory and description of the buildings, facilities, and other structures occupied on the Campus and beyond should be provided as required by Section 80D-3.2 of the Code. An updated illustrative Campus plan should be prepared showing the location of each facility. For each building the following information should be provided: total gross floor area, occupancy or use by gross floor area,

height in stories and in feet, FAR (for each lot), year built and ownership. Information on parking facilities should include the total number of parking spaces and a breakdown of the number of spaces allocated by used category. Appropriate description of other types of facilities and their use such as infrastructure systems, recreational fields, and places of assembly should be provided.

An analysis of the existing facilities in light of the identified program needs and objectives should be undertaken and documented. Specific facility objectives which are addressed in the IMP should be set out. This section should conclude with a summary of Children's need for additional facilities described by use and floor area projected on an annual basis over the ten-year period of the IMP.

IV. CAMPUS CONTEXT

The immediate area of the Campus around Children's should be inventoried, analyzed and summarized in the IMP. The analysis should include land use, building height and FARs, historic resources, open space, student and employee population, public facilities and a ten-year projection of future growth. The capacity and condition of the infrastructure system that serves the Campus should be documented. The impact of Children's and its proposed expansion on the surrounding area should be discussed. Area residents and businesses should be consulted and their views regarding the IMP should be described. From this analysis, guidelines should be defined that will shape the IMP so that Children's will relate positively to the area around it.

V. MASTER PLAN

A. Concept Plan

At least one brief alternative concept plan should be prepared and analyzed for Children's with particular attention to areas of the Campus which interface with adjacent neighborhoods, other institutional access ways, public streets, and historic resources. This analysis should address the question of the amount and types of services and facilities to be located on and off the Campus. An analysis

providing the rationale for locating uses on-site in the LMA should be provided. Alternate off-site locations outside the LMA for uses that are determined not essential to be located in the LMA should be identified and a strategy for moving these uses off-site should be delineated. Elements of the concept plan should include the following:

1. Definition and description of planning objectives;
2. Illustration and description of a campus development plan;
3. Design concepts which are used should be clarified;
4. Articulation of subareas of the Campus based on use, density, and/or physical features;
5. Definition of design principles which will serve as guidelines for the development of the Campus; and
6. Identification of the pedestrian circulation system and its objectives and guidelines.

The alternative analysis should lead to an explanation of why the proposed plan as defined in the IMP was chosen.

B. Development Program

A description of all the significant physical changes proposed for the ten year IMP time period should be provided at the level of definition required by Section 80D-3.4 of the Code. Included here should be information on the renovation of existing facilities, leased space both on and off the Campus, urban design improvements, and any potential future projects identified in the IMPNF. For those locations which are to gain zoning rights through the IMP, the information required is defined in Section 80D-3.4 of the Code. The impacts of each proposal on the Campus should be discussed at a level of definition appropriate to the IMP and mindful that large projects shall undergo Article 80 Large Project Review when they are implemented. The demolition of any building over 50 years old is subject to the provision of Article 85 of the Zoning Code (Demolition Delay).

1. Buildings

The information required for each new or recycled building project proposed includes the following:

- (a) site location and approximate building footprint;
- (b) square feet of total gross floor are and principal subuses;
- (c) gross floor feet of space that is demolished or occupancy terminated;
- (d) floor area ration (FAR) for each lot;
- (e) building height in approximate feet and stories;
- (f) number of parking spaces;
- (g) current zoning of site;
- (h) total project cost;
- (i) estimated development impact project payments; and
- (j) estimated month and year of construction start and completion.

2. Campus Improvements

Information required for campus improvement projects include the following:

- (a) description;
- (b) location;
- (c) estimated cost; and
- (d) estimated month and year of construction start and completion.

3. Campus Expansion

If Children's has any expansion proposed through lease or purchase, the following information must be provided for each expansion location:

- (a) location;
- (b) gross floor area in square feet broken down by uses proposed by Children's;
- (c) lease period;
- (d) current use;
- (e) current owners;

- (f) current zoning;
- (g) current property assessment and property taxes paid to the city;
- (h) current occupants to be dislocated;
- (i) description of proposed improvements;
- (j) estimated cost; and
- (k) acquisition and improvement schedule.

4. Development Program Context

A series of context drawings should be prepared showing phase-by-phase the proposed developments in their larger surroundings for the Campus, including:

- (a) building heights map;
- (b) an open space plan; and
- (c) an isometric (3-D) drawing showing the general building massing of all buildings in the area.

A study model of the larger neighborhood at a scale of 1"=40'-0" showing the proposed phases in context should be provided.

C. Transportation Plan

The scope of the transportation component of the IMP is included in Appendix 1.

D. Community Benefits Plan

1. Training and Employment Initiatives

Provide a detailed description of Children's current workforce and project future employment needs concerning the IMP and Proposed Projects and any other proposals. There is particular interest in learning about that part of the workforce that is drawn from the adjacent neighborhoods and about programs to recruit, train and promote this population. Comments regarding the workforce development component of the IMP are included in Appendix 1.

2. Taxes

In the context of the IMP process, Children's should meet with the City's Assessing Department to address the concerns expressed in the Assessing Department memo found in Appendix 1.

3. Other benefits

Children's should identify current and future proposed community benefits as well as any other benefits that minimize or mitigate detrimental and adverse impacts on the local community from Children's IMP and Proposed Projects.

E. URBAN DESIGN SCOPE

In preparing the IMP, Children's shall address the following issues, providing thorough documentation in text and images that propose several options for each issue.

1. LMA Interim Guidelines

The Boston Redevelopment Authority (BRA) Interim Guidelines seek to maintain and enhance the major streets and parks in the LMA, the area's most important positive urban design elements. Specifically the Guidelines ensure that new buildings will strengthen the dominant character of the major streets by reinforcing the prevailing height and massing. Part of the Master Plan Area falls within the Interim Guidelines Parks and Boulevards Protection Zone. This Zone requires that the buildings fronting on Longwood Avenue not exceed 75 feet in height to a depth from the street line of 75 feet. The Dimensional Guidelines also require that

- a. buildings fronting on Longwood not exceed 75 feet to a depth of 75 feet;
- b. that they not exceed 150 feet in height between 75 and 150 feet from the street line unless the proposal includes "exceptional

public benefits", in which case they may be granted additional height up to 205 feet; and,

- c. further from the street line than 150 feet building heights may be eligible for a residential height bonus if they provide residential use.

The proponents shall design any new projects or additions proposed in the Master Plan to enhance the character of the LMA and conform to the Interim Guidelines.

2. Longwood Avenue

The area's eponymous street along with Brookline Avenue are the two most important streets internal to the LMA. It is particularly important on Longwood Avenue to strengthen the scale and character expressed by the best examples of architecture in the area. Also of major importance is the vista of the Hunnewell Building dome located at the bend in Longwood Avenue and visible from Huntington Avenue and from the Riverway bridge into Brookline. The Master Plan projects have the opportunity not only to retain this two-way vista but also to enhance it by replacing the Enders Building.

3. Binney Street

The LMA has a deficiency of infrastructure: not enough streets to permit segregation of functions that would enhance amenity and improve public safety. Binney Street is typical of the area in serving multiple functions: pedestrian, vehicular, emergency vehicle, ambulance and service access, and the urban design function of helping to divide the LMA's long blocks into elements of a scale more characteristic of Boston. Children's shall design the new project fronting on Binney Street recognizing the desire to improve the street functionally and esthetically. Binney Street is not the back door of Children's Hospital; it is the front door of Dana-Farber Cancer Institute.

4. Open Spaces

The original Master Plan for Children's Hospital proposed the removal of the two-story building on Longwood between Hunnewell and Enders and its replacement with a park filling completely the front yard of the Main Building. With parks and other open spaces gradually being filled with buildings it becomes increasingly important to expand the inventory of parks in the LMA. Children's shall review the earlier plans and describe ways to achieve their goals.

5. Way Finding

With increasing development it becomes more and more difficult to find one's way around the LMA, especially considering that many of the area's visitors are sick or are visiting sick friends and relatives and are in an anxious frame-of-mind to begin with. Children's has the opportunity in the Master Plan that includes important intersections on Longwood Avenue and the main entrance to the hospital to improve way finding in a dramatic way. Children's can become one of the few hospitals in Boston with an easily found and identified front door.

B. Institutional Master Plan (IMP) Urban Design Submission Requirements

Children's shall submit materials to allow for a thorough review of the options available to address the issues cited above as well as others that may arise in further development and examination of the IMP. The submission shall include all of the items listed in the Boston Zoning Code Article 80D-3, 2 and 4, *i.e.*, existing property and proposed projects of Children's including those items listed in the text of the article as those which the proponent "may include". In addition to the text, drawings, photographs, models and other graphics necessary to respond to the

issues listed above, the proponents shall submit the following materials in printed and duplicable digital format:

1. a completed Institutional Assessment Form;
2. a comprehensive Plan Area map, clearly indicating bounds and all site locations and approximate building footprints;
3. plan area map, modified to show existing and proposed zoning restrictions;
4. a table and map listing all buildings owned or leased by the institution, both on and off the campus, and indicating
 - a. total area including area below grade,
 - b. existing uses and area devoted to each use,
 - c. height in feet and number of floors, including floors below grade
 - d. age of structures,
 - e. condition of structures,
 - f. proposed action (rehabilitation, demolition, replacement, or other) during the term of the IMP, and
 - g. proposed uses with area devoted to each use;
5. gross floor area within plan area;
6. gross floor area eliminated from existing buildings through demolition of existing facilities;
7. floor area ratios of building sites and in total;
8. building heights within plan area;
9. parking areas or facilities, both existing and to be modified or provided in connection with proposed projects;
10. a series of neighborhood plans at a scale of 1"=100' showing existing and proposed building heights, building uses, pedestrian circulation, and vehicular circulation of cars, service vehicles, and buses, shuttles, or ambulances; the area to be included in the plans shall extend not

less than 1,500 feet in all directions from the proposed project site except as specifically agreed upon otherwise by the BRA;

11. diagrammatic sections through the neighborhood cutting north-south and east-west at the scale and distance indicated above;
12. true-scale three-dimensional graphic representations of the area indicated above either as aerial perspective or isometric views showing all buildings, streets, parks, and natural features; and
13. a study model at a scale of 1":40' showing the proposal in the context of other buildings extending 500 feet in all directions from the project site or as determined by the BRA.

F. PUBLIC NOTICE

Children's 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 to the BRA as required by Section 80A-2. This Notice shall be published within five (5) days after the receipt of the IMP by the BRA. Public comments shall be transmitted to the BRA within sixty (60) days of the publication of this Notice, unless a time extension has been granted by the BRA in accordance with the provisions of Article 80 or to coordinate the Hospital's IMP review with any required Large Project Review. Following publication of the Notice, Children's shall submit to the BRA a copy of the published Notice together with the date of publication.

Comment Letters:

| Department/ Organization | Signed/ Sent by: | Date |
|--|--|-------------|
| Boston Public Health Commission | Maia Brodyfield | 4/3/2007 |
| Office of Jobs and Community Services | Ken Barnes | 4/2/2007 |
| Boston Transportation Department | Frank K. Johnson | 4/2/2007 |
| Assessing Department | Matthew Englander | 3/29/2007 |
| Boston Groundwater Trust | Elliott Laffer | 3/16/2007 |
| Boston Water and Sewer Commission | John P. Sullivan | 2/15/2007 |
| Audubon Circle | Jack Creighton | 4/2/2007 |
| Task Force | Edward Lamperti | 4/2/2007 |
| Fenway CDC | Lisa Soli | 4/2/2007 |
| Mission Hill Neighborhood Housing Services | James Hoffman | 4/2/2007 |
| Sociedad Latina | Alexandra Oliver-Davila / Tatiana Cortes | 3/39/07 |
| Fenway Civic Association | Bill Richardson | 3/30/2007 |
| MASCO | Sarah J. Hamilton | 3/30/2007 |
| Sociedad Latina | | |
| Sociedad Latina | | |
| Charles River Watershed Association | David S. Kaplan | 3/30/2007 |

APPENDIX 1
COMMENTS FROM PUBLIC AGENCIES

BPHC Memo

Date: 4/3/2007

To: Sonal Gandhi, Project Manager, Boston Redevelopment Authority

From: Maia BrodyField, Senior Policy Advisor, Boston Public Health Commission

Cc: Leon Bethune, Director, Environmental Health Office;
Valerie Bassett, Director, Intergovernmental Relation & Public Advocacy

RE: Boston Public Health Commission Comments on Institutional Master Plan/Project Notification Form filed by Children's Hospital Boston in January of 2007

Thank you for the opportunity to comment on the Institutional Master Plan/Project Notification Form filed by Children's Hospital Boston in January of 2007. The Boston Public Health Commission has engaged in many fruitful partnerships with Children's Hospital Boston including efforts around asthma, violence prevention and injury prevention. In addition to expressing our appreciation for their commitment to improving the health of Boston's children, we would like to address several concerns that were discussed during a meeting we had with Children's representatives on March 27, 2007.

Our primary concern regarding the IMP/PNF is the preservation of core services for Boston residents. While we support every effort to reduce the environmental impact of the growing patient population, we welcome concrete assurances that no program will be completely moved to the suburbs and that retention of these services at the main campus. Access to preventive and clinical services for the residents of Boston is the Boston Public Health Commission's major concern and top priority.

We value Children's commitment to involving community—both the LMA community as well as those in the surrounding neighborhoods of Mission Hill, Kenmore, Fenway and others—in their planning process. As we have indicated previously, we encourage every effort to increase transparency about institutional plans. We are pleased that Children's has heard the concerns of the surrounding neighborhoods both in terms of traffic congestion and quality of life issues as well as the need for workforce development. We would echo the sentiment that there is a need for a strong commitment from Children's to workforce development particularly towards increasing racial and ethnic diversity in health care professions. During our meeting, Children's indicated that they will be expanding their workforce development efforts and we look forward to reviewing the details of that plan. We urge Children's Hospital to monitor its level of workforce development success for racial and ethnic diversity for all levels of employment, and to share such information with the BPHC and surrounding neighborhoods.

BPHC Comments on Children's Hospital Boston IMP/PNF

We also support Children's plan to assign all new parking spaces created under this plan to patients and their families as it will reduce the traffic created by the current valet parking system at the main entrance and it reinforces their commitment to encouraging alternative transportation for staff. We would like to see programs for bicycle parking facilities, and reduce parking fees for commuter vehicles with multiple occupants. We were pleased to learn of Children's involvement in and commitment to other city efforts to improve transportation options such as the addition of the Yawkey Station on the Framingham/Worcester line and development of the Urban Ring Project. We support Children's efforts to "recycle" their current space through vertical expansion rather than expanding further into the community and their stated commitment to achieving LEED certification.

The Boston Public Health Commission continues to urge Children's to increase partnerships in prevention regarding efforts around asthma, violence prevention, injury prevention, and child overweight and other health concerns for the children of Boston.

Gandhi, Sonal

From: Barnes, Ken
Sent: Monday, April 02, 2007 2:00 PM
To: Gandhi, Sonal
Subject: RE: Children's Hospital IMPNF/PNF Comment period ends TODAY

The Children's Hospital IMPNF/PNF does a good job of describing current workforce development efforts, including: summer job activities; the Student Career Opportunity Outreach Program (SCOOP); participation in and financial support of the Health Care and Research Training Institute (of which Children's is a founding partner); and support for Year Up. At a meeting with the Office of Jobs and Community Services on March 30, Children's presented additional detail on current programs and discussed new partnerships being developed with the O'Bryant High School and Sociedad Latina.

The next task for Children's is to flesh out the new initiatives so that their value can be calculated in accordance with the requirement of the Interim Guidelines. In addition, Children's should review existing workforce programs to see if any of these can be expanded.

From: Gandhi, Sonal
Sent: Monday, April 02, 2007 1:11 PM
To: Barnes, Ken; Gupta, Vineet; Zlody, Maura; 'Maia BrodyField'; Englander, Matthew; Carlson, David
Subject: Children's Hospital IMPNF/PNF Comment period ends TODAY

Hello-
This is a friendly reminder that the comment period for the Children's Hospital IMPNF/PNF ends TODAY. If you have already submitted your comments, thank you. Otherwise, please submit your comments (if any) via:

1. email
2. fax (617-742-7783)
3. or snail mail at:
Boston Redevelopment Authority
One City Hall Square
Boston MA 02201

Please feel free to contact me if you have any questions via email or phone at 617-918-4314.
Sonal



BOSTON
TRANSPORTATION
DEPARTMENT

ONE CITY HALL PLAZA/ROOM 721
BOSTON, MASSACHUSETTS 02201
(617) 635-4680/FAX (617) 635-4295

April 2, 2007

Sonal Gandhi, Senior Manager
Boston Redevelopment Authority
One City hall Plaza
Boston, MA 02201

Re: Children's Hospital Boston: Comments on Institutional Master Plan Notification Form/Project Notification Form (IMP/NF/PNF)

Dear Ms. Gandhi:

Thank you for the opportunity to comment on the Children's Hospital Institutional Master Plan Notification Form/Project Notification Form filed on January 30, 2007, for land owned by Children's in Boston, MA, primarily within the Longwood Medical and Academic Areas (LMA), and for certain improvements to its core campus which are subject to Article 80B Large Project Review.

Children's proposes to add upper level floors above its existing Main Building to service in-patient needs, as well as make modifications to the Main Building's lobby and lower level, and to construct a new Patient Care Center to replace the current Enders Building, which will be demolished. Both of these projects are included in the IMPPN and subject to the PNF for Article 80B Large Project Review. These two projects will increase the Children's LMA campus by approximately 129,605 square feet of floor area over the ten-year of the proposed IMP.

Two other Children's projects not included in the IMPNF/PNF, yet occurring within the time frame of the IMP and potentially impacting traffic in the LMA, are the Longwood Research Institute development (approved as part of PDA No. 61), and development of its 819 Beacon Street Property. Even though not included in the submittal, the traffic impacts of these two projects should be included when calculating trip generations and mode share analysis.

The IMPNF/PNF marks the start of a comprehensive public review for this master plan. The Boston Transportation Department has reviewed the IMPNF/PNF, attended the scoping session on February 13, 2007, and subsequently met with the proponent's traffic consultants. Some key issues that need to be addressed in the DPIR that were not clearly articulated in the IMPNF/PNF are discussed below:



► Bicycle storage and usage at each site should be clearly identified.

► Conventional trash and medical waste handling and collection at each site must be clearly shown, including truck types and sizes and appropriate turning radii. Because of the retail, hospital research & office nature of this project, the proponent needs to submit a plan showing an on-site (1) loading dock scenario for each building. This is to be concurrently operational with a separately designated Dumpster/trash compactor bay. This would be a total of 2 bays in all. This should show proper length, height and width clearances. This design should be in conformance with BTM Design guidelines for "Loading Docks and Garages" On street loading is not an option given the size of the project.

Additionally, the plans need to identify internal loading circulation and demonstrate access and egress from the site. The proponent must detail the garage operations and identify on-site queuing areas to avoid vehicles queuing on Brookline Ave/Longwood, Binney Street & Jimmy Fund Way. Furthermore, the committee on Licenses may have serious concerns relative to this access based on life safety issues. The turning radii for the passenger vehicles, SU-30, SU-35 & WB-40 need to be included in this report detailing internal site circulation.

► A traffic study analyzing the impacts of the project final build condition and during construction on various intersections in the LMA should be included in the DPIR. The proponent's traffic consultant should present the scope of work for this study to BTM for its approval. The traffic analysis requested should be based on the existing base numbers in the Kenmore/Fenway/Longwood for final build numbers in this area. This analysis should be in a Synchro format utilizing the calibrated numbers and delta assignment plots, this has not been provided. The ITE land use assumption for all analysis should have been Central Business District (CBD) due to the major Transportation, Research and Hospital Facilities and density of the land use in the Brookline/Longwood Ave area.

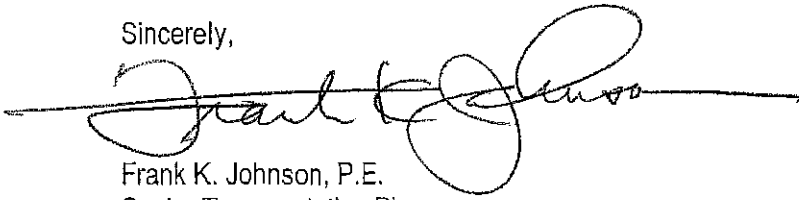
► All streetscape design shall be submitted jointly to BTM and DPW. All designs shall be consistent with BTM guidelines and at the direction of the project engineer from BTM Project architect shall work through the projects traffic engineering consultant to coordinate design and submittals. All PIC issues must be facilitated through both the PIC Commission (Vinny Leo) jointly with BTM Engineering.

► The proponent should include traffic mitigation measures in the DPIR, over and beyond those mentioned in the IMPNF/PNF, to account for extended construction activities and their impacts on pedestrian circulation, bicycle and vehicular access, patient loading and unloading, , deliveries, services and waste collections, at each site. The mitigation included in this submittal is insufficient and lacks proper attention to traffic (both pedestrian and vehicular) volumes and operations around the District. Mitigation should include, and not limited to, pedestrian enhancements (based on ped volumes), signal enhancements, traffic monitoring enhancements, roadway markings and sign improvements. The proponent has not set up meeting with BTM Engineering to discuss this section. It should be noted that until the proper analysis has been submitted, final mitigation cannot be evaluated. Again, the traffic consultant needs to set up a meeting to discuss this issue.

► A construction Management Plan needs to be developed concurrently with the Transportation Access Plan Agreement (TAPA). The land use adjacent to this development and with city arterial and local connections that pass through this area, the project becomes that much more challenging. The proponent (and strongly advised – there General Contractor) must schedule an appointment with BTD Construction Management Section (617) 635-2722, to have a preliminary review of there staging and CMP document.

Thank you again for the opportunity to comment on Children's IMNF/PNF. BTD looks forward to working with the BRA, the Proponent and the community on this Master Plan, and in developing a TAPA and Construction Management Plan.

Sincerely,

A handwritten signature in black ink, appearing to read "Frank K. Johnson", written over a horizontal line.

Frank K. Johnson, P.E.
Senior Transportation Planner
BTD Policy & Planning

cc: Vineet Gupta, Director Policy & Planning
John DeBenedictis, Director of Engineering



ASSESSING DEPARTMENT

Boston City Hall, Room 301, Boston, MA 02201

TO: Sonal Gandhi, Senior Project Manager
FROM: Matthew K. Englander, Director of Tax Policy
DATE: March 29, 2007
RE: Children's Hospital Scoping Session Comments

Children's Hospital recently submitted their Institutional Master Plan (IMP) to the Boston Redevelopment Authority (BRA). Part of their expansion plan includes the Longwood Research Institute, or PDA #61, an 18-story facility consisting of 440,000 square feet of gross floor area. The inclusion of this facility in Children's Hospital's IMP poses a number of concerns for the City.

Background:

In August 2003, Beth Israel Deaconess was the owner of PDA #61. At that time, Beth Israel submitted a Draft Project Impact Report (DPIR) to the BRA detailing their future usage of that land. Their plan was as follows:

- Beth Israel planned to one day occupy the Longwood North Research Center (LNRC), a state of the art research facility.
- Once Beth Israel received approval from the BRA, they would sell the site to Lyme Properties, a commercial developer.
- When construction period ended, Beth Israel would occupy the LNRC.
- The facility, owned by a commercial corporation, would be subject to annual property taxes of approximately \$2.5 to \$3.5 million.

The project proceeded as planned. In June 2005, after gaining approval from the BRA and Zoning Commission, Beth Israel sold the site and future development rights to Lyme Properties for \$33.4 million. The sale agreement included a provision whereby Beth Israel would operate as the owner of the site, preserving the exemption on the property, until Lyme Properties was ready to begin the construction phase. During the course of the BRA and Zoning Board approval process, Lyme Properties made a pledge to the City that the property would generate significant tax revenue on an annual basis.

In August 2006 the plan changed dramatically. Lyme Properties decided to sell the site and future development rights to Children's Hospital for \$52.8 million. Having already planned for the expansion of their main building in the Longwood area, Children's Hospital sought to have PDA #61 included in their most recently filed IMP. Since their intention is to occupy this site, to be called the Longwood Research Institute, our concern is that they will seek a full property tax exemption.

Concerns:

If the BRA approves the project then the City will lose out on \$2.5 to \$3.5 million annual tax revenue that is badly needed. It would also set a dangerous precedent where commercial developers could obtain project approval from the BRA, promising significant tax dollars to the City, only to turn around and sell the project rights to an exempt organization thereby escaping taxation.

Recommendation:

The tax status of PDA #61 would have been a factor in the sale between Children's Hospital and Lyme Properties, where Children's could have paid more for the site if they knew the facility would be used for tax-exempt purposes. In that case, the ultimate beneficiary of the exemption is Lyme Properties, who will receive a \$20 million profit on a property it never actually owned.

The BRA should not approve this project until the tax status of the property is resolved to the City's satisfaction.

Boston

Groundwater Trust

234 Clarendon St., Third Floor, Boston, MA 02116
617.859.8439 voice • 617.266.8750 fax
bostongroundwater.org

March 16, 2007

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Executive Director

Elliott Laffer

Sonal Gandhi, Senior Manager Economic Development
Boston Redevelopment Authority
One City Hall Square
Boston, MA 02201-1007

Subject: Children's Hospital Boston

Dear Ms Gandhi:

Thank you for the opportunity to comment on the Institutional Master Plan Notification Form for Children's Hospital Boston. The Boston Groundwater Trust was established by the Boston City Council to monitor groundwater levels in sections of the City where the integrity of building foundations is threatened by lowered groundwater levels and to make recommendations for solving the problem. As such, my comments are restricted to groundwater related issues.

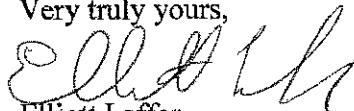
As noted in the IMPNF, the portions of the Children's Hospital campus located north of Longwood Avenue are included in the Groundwater Conservation Overlay District. Projects constructed on that part of the campus would have to meet the GCOD requirements for recharge while also demonstrating that they cannot cause a reduction in groundwater levels on site or on adjoining parcels.

While the proposed IMPNF projects are primarily located south of Longwood Avenue, they are on the edge of the GCOD. It is therefore important that they be designed to not be able to reduce groundwater levels within the GCOD. This is particularly true for the proposed five level underground parking garage that will be located under the Patient Care Center immediately south of Longwood Avenue.

Because of the preliminary nature of the design, now would be a good time to impose this requirement. Many projects have been able to build underground garages designed so that there will be no leakage of groundwater and no potential for reduction in groundwater levels. If included at this early stage, it should be most economical to do so.

I look forward to working with Children's and the Authority to help assure that this world class medical facility will also be designed to help with the solution of Boston's groundwater problems.

Very truly yours,

A handwritten signature in black ink, appearing to read 'Elliott Laffer', written in a cursive style.

Elliott Laffer
Executive Director

Cc: Maura Zlody, BED

**Boston Water and
Sewer Commission**



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

February 15, 2007

Sonal Gandhi
Senior Manager
Boston Redevelopment Authority
One City Hall Square
Boston, MA 02201-1007

Re: Children's Hospital Boston
Institutional Master Plan Notification Form /
Project Notification Form

Dear Ms. Gandhi:

The Boston Water and Sewer Commission (Commission) has reviewed the Institutional Master Plan Notification Form (IMP/NF) / Project Notification Form (PNF) for the Children's Hospital Boston (CHB). This letter provides the Commission's comments on the Master Plan and PNF.

The CHB main campus south of Longwood Avenue is generally bounded by Longwood Avenue, Binney Street, Shattuck Street and Meadow Lane and is approximately eight acres. The parcel south of Longwood Avenue is approximately 2.67 acres and contains the Karp Family Research Laboratories and Patient and Family Parking Garage. The proposed IMP projects site is bounded by Longwood Avenue to the north, Binney Street to the west, and other CHB buildings to the south and east. It is not clear what the area of the proposed IMP projects site is.

The main campus facilities have been the subject of prior BRA approval as part of the Planned Development Area (PDA) process. The current IMP/NF /PNF supersedes the Development Plan for PDA No. 29 and phase two of PDA No. 61. CHB has proposed that the on-campus area be zoned as an "I" (Institutional) rather than as a "D" (Development Plan) overlay district.

The two proposed projects in the IMP/NF/PNF include:

- 1) Main Building Expansion - A 56,400-square-foot (sf) net addition to the Main Building will include 63 new critical care beds and new entrance lobby. This includes the demolition of approximately 7,000 sf of the existing building.
- 2) Patient Care Center – An approximately 348,200 sf, 15-story building with the capacity to expand inpatient and outpatient beds, ambulatory care, radiology services, operating room capacity, and other support services. It will also include 350 parking spaces on five levels in the basement, a new basement central utility plant, and a Sanctuary on the roof.



For water service, the proposed projects site is served by a 12-inch low service main and a 12-inch low-service main in Longwood Avenue, an 8-inch low service main in Binney Street and a 12-inch low service that runs under the Main Building.

For sanitary sewer service, the proposed projects site is served by 12-inch sanitary sewers in Longwood Avenue, Binney Street, and under the main building. For storm drain service, the proposed projects sites is served by a 12-inch storm drain in Binney Street and 15-inch storm drains in Longwood Avenue and under the Main Building.

The IMPNF states that the proposed projects will increase the water demand by approximately 9,070 gallons per day (gpd) of water. The proposed projects will generate approximately an additional 8,245 gpd of wastewater.

The Commission has the following comments regarding the proposed projects:

General

1. CHB must submit a General Service Application and a site plan to the Commission for review and approval. Any new or relocated water mains, sewers and storm drains must be designed and constructed at CHB'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. To assure compliance with the Commission's requirements, CHB, must submit a site plan to the Commission's Engineering Customer Service Department for review and approval when the design of any new water and wastewater systems and the proposed service connections to those systems are 50 percent complete. The site plan should include the locations of any new, relocated and existing water mains, sewers and drains which serve the site, proposed service connections as well as water meter locations.
2. Prior to demolition of any buildings, all water, sewer and storm drain connections to the buildings must be cut and capped at the main pipe in accordance with the Commission's requirements. The proponent must then complete a Termination Verification Approval Form for a Demolition Permit, available from the Commission and submit the completed form to the City of Boston's Inspectional Services Department before a demolition permit will be issued.
3. The Department of Environmental Protection, in cooperation with the Massachusetts Water Resources Authority 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. In this regard, DEP has been routinely requiring proponents proposing to add significant new wastewater flow to assist in the I/I reduction effort to ensure that the additional wastewater flows are offset by the removal of I/I. Currently, DEP is typically using a minimum 4:1 ratio for I/I removal to new wastewater flow added. The Commission supports the DEP/MWRA policy, and will require CHB to develop a consistent inflow reduction plan.
4. For any proposed masonry repair and cleaning, CHB will be required to obtain from the Boston Air Pollution Control Commission, a permit for Abrasive Blasting or Chemical Cleaning. In accordance with this permit, CHB will be required to provide a detailed



description as to how chemical mist and run-off will be contained and either treated before discharge to the sewer or drainage system or collected and disposed of lawfully off site. A copy of the description and any related site plans must be provided to the Commission's Engineering Customer Service Department for review before masonry repair and cleaning commences. CHB is advised that the Commission may impose additional conditions and requirements before permitting the discharge of the treated wash water to enter the sewer or drainage system.

5. CHB should be aware that the US Environmental Protection Agency issued a Remediation General Permit (RGP) for Groundwater Remediation, Contaminated Construction Dewatering, and Miscellaneous Surface Water Discharges. If the project involves any subsurface work and groundwater contaminated with petroleum products, for example, is encountered, CHB will be required to apply for a RGP to cover these discharges.
6. The water use and sewage generation estimates may not be correct because the flow rates are based on the square footage of the buildings. It is recommended that the flow rates for hospitals be based on the number of beds instead of square footage according to 310 CMR 15.000. Because the proposed projects involve additional beds and other expanded services, the estimates should reflect this combination. The Commission requires that these values be recalculated and submitted with the Site Plan. The proponent should provide separate estimates of peak and continuous maximum water demand for residential, irrigation and air-conditioning make-up water for the project. Estimates should be based on full-site build-out of the proposed project. The proponent should also provide the methodology used to estimate water demand for the proposed project.
7. A Groundwater Conservation Overlay District has been developed and this project is located within it. This district is intended to promote the restoration of groundwater levels and reduce the impact of surface water runoff. The applicant for a building permit may be required to construct a structure capable of retaining a specific amount of stormwater accumulated on the site. This retention structure would be designed to direct the stormwater towards the groundwater table for recharge. CHB should contact the Inspectional Services Department for further information.

Water

1. In addition to the water conservation measures required by the Massachusetts Plumbing Code, CHB should also consider implementing other water saving measures, such as installing low flow toilets and flow-restricting faucets. The Commission suggests that any public restrooms also be equipped with sensor-operated faucets and toilets.
2. If a hydrant is to be used during construction, CHB will be required to obtain a Hydrant Permit for use of any hydrant during the construction phase of this project. The water used from the hydrant must be metered. CHB should contact the Commission's Operations Division for information on and to obtain a Hydrant Permit.
3. The Commission is utilizing a Fixed Radio Meter Reading System to obtain water meter readings. For new water meters, the Commission provides a Meter Transmitter Unit



(MTU) and connects the device to the meter. For information regarding the installation of MTUs, CHB should contact the Commission's Meter installation Department.

4. If potable water is to be used for irrigation of the Sanctuary or other landscaped areas, the amount should be quantified. If the proponent plans to install a sprinkler system, the Commission suggests that timers, tension meters (soil moisture indicators) and rainfall sensors also be installed. The Commission strongly encourages the creation of landscape that requires minimal use of potable water.

Sewage / Drainage

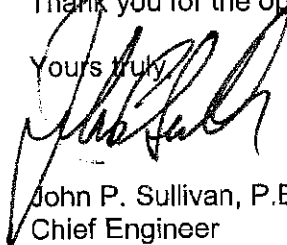
1. The proponent must submit to the Commission's Engineering Customer Service Department a detailed stormwater management plan which:
 - Identifies best management practices for controlling erosion and for preventing the discharge of sediment and contaminated groundwater or stormwater runoff to the Commission's drainage system when the construction is underway.
 - Includes 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 the construction.
 - Provides a stormwater management plan in compliance with the DEP's standards mentioned above. The plan should include a description of the measures to control pollutants in stormwater after construction is completed.
2. 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 and the Massachusetts Department of Environmental Protection. CHB is responsible for determining if such a permit is required and for obtaining the permit. If such a permit is required, it is requested that a copy of the permit and any pollution prevention plan prepared pursuant to the permit be provided to the Commission's Engineering Services Department prior to the commencement of construction. The pollution prevention plan submitted pursuant to a NPDES Permit may be submitted in place of the pollution prevention plan required by the Commission provided the Plan addresses the same components identified in item 1 above.
3. CHB must fully investigate methods for retaining stormwater on-site before the Commission will consider a request to discharge stormwater to the Commission's system. The site plan should indicate how storm drainage from roof drains will be handled and the feasibility of retaining their stormwater discharge on-site. Under no circumstances will stormwater be allowed to discharge to a sanitary sewer.
4. The Commission requests that CHB install a permanent casting stating "Don't Dump: Drains to Charles River" next to any catch basin that is created or modified as part of this project. The proponent should contact the Commission's Operations Division for information regarding the purchase of the castings.



2. If a cafeteria or food service facility is built as part of this project, grease traps will be required in accordance with the Commission's Sewer use Regulations. CHB is advised to consult with Mr. Richard Fowler, Deputy Superintendent of Field Operations, with regards to grease traps.
5. The Commission requires that existing stormwater and sanitary sewer service connections, which are to be re-used by the proposed project, be dye tested to confirm they are connected to the appropriate system.
6. Sanitary sewage must be kept separate from stormwater and separate sanitary sewer and storm drain service connections must be provided.
7. If CHB seeks to discharge dewatering drainage to the Commission's sewer system, they will be required to obtain a Drainage Discharge Permit from the Commission's Engineering Customer Service Department prior to discharge.
8. The enclosed floors of a parking garage must drain through oil separators into the sewer system in accordance with the Commission's Sewer Use Regulations. The Commission's Requirements for Site Plans, available by contacting the Engineering Services Department, include requirements for separators.

Thank you for the opportunity to comment on this project.

Yours truly,



John P. Sullivan, P.E.
Chief Engineer

JPS/dc

c: C. Weinstein, CHB
P. Quan, CHB
D. Peck, CHB
J. Walser, BRA
M. Zlody, BED
P. Larocque, BWSC

**APPENDIX 2
COMMENTS FROM TASK FORCE**

Gandhi, Sonal

From: Jack Creighton [audcirfin@msn.com]
Sent: Monday, April 02, 2007 1:24 PM
To: Gandhi, Sonal
Subject: Re: REMINDER: Children's Hospital IMPNF/PNF Comment Period ends TODAY

There have been no objections from Audubon Circle. Personally I find the Children's proposal well warranted and I fully support it.

Jack Creighton Mobile Ph. 617 733 1822
Fax 617 507 8458
Work 617 266 9700 jrc@s-net-invest.com
www.s-net-nvest.com

----- Original Message -----

From: Gandhi, Sonal
To: Joe Ronayne ; lisasoli@verizon.net ; isoli@fenwaycdc.org ; CANCROL@redsox.com ; shamilton@masco.harvard.edu ; mokeefe8@verizon.net ; jrc@sourcenetfinancial.com ; Maryjane_curran@yahoo.com ; elamperti@cbrinstitute.org ; jhmhns@gis.net ; richard_mills@hms.harvard.edu ; tatiana_crts@yahoo.com ; alex@sociedadlatina.org ; Joe Ronayne
Cc: Weinstejn, Charles ; Weldon, Kate ; Sullivan, Katelyn
Sent: Monday, April 02, 2007 1:08 PM
Subject: REMINDER: Children's Hospital IMPNF/PNF Comment Period ends TODAY

Hello-

This is a friendly reminder that the comment period for the Children's Hospital IMPNF/PNF ends TODAY. If you have already submitted your comments, thank you. Otherwise, please submit your comments (if any) via:

1. email
2. fax (617-742-7783)
3. or snail mail at:
Boston Redevelopment Authority
One City Hall Square
Boston MA 02201

Please feel free to contact me if you have any questions via email or phone at 617-918-4314.
Sonal

The substance of this message, including any attachments, may be confidential, legally privileged and/or exempt from disclosure pursuant to Massachusetts law. It is intended solely for the addressee. If you received this in error, please contact the sender and delete the material from any computer.

Edward D. Lamperti
370 Longwood Avenue #31
Boston, MA 02215
lamperti@biochem.bumc.bu.edu
Monday, April 2, 2007

Sonal Gandhi
Senior Manager, Economic Development
Boston Redevelopment Authority
One City Hall Square
Boston, MA 02201-1007
Sonal.Gandhi.bra@ci.boston.ma.us

Dear Sonal:

As part of my responsibility as a member of the recently assembled BRA Task Force for Children's Hospital, I am here submitting comments for the Scoping Determinations for Children's Hospital's Institutional Master Plan (IMP). Because this plan involves multiple projects spanning a ten-year period, I expect that there will be many opportunities in the future to address specific issues as we proceed, so at this point I will confine my comments to a few broader concerns, but with specific attention to points that have been raised in Task Force meetings to date.

For sake of full disclosure, I note that I am a local resident employed by an unrelated institution, and represent only myself. I was employed more than a decade ago by Children's Hospital, but would derive no benefit from its plans. As a former employee, I strongly support the institution's mission; as a resident, I am concerned about the impacts of development in the Longwood Medical Area, and am in the process of being displaced by such development.

The current 10-year plan formulated by Children's Hospital has as its centerpiece a substantial alteration of its main entrance and surrounding buildings, and a fundamental rearrangement of its research facilities. When I first heard about this plan I was startled by the extent of the intended changes and wondered about the wisdom of such dramatic reconstruction and about the feasibility of managing this rearrangement in an institution that will remain in full operation throughout the process, in one of the busiest areas of the city. The IMP includes a proposed addition to the Hospital's main (in-patient) building, the demolition of its principal research (Enders) building, and the construction of a new patient care center to form a new main entrance to the complex. As part of this massive physical reorganization, Children's Hospital has purchased the not-yet-started second phase of what was once Lyme Properties' "Center for Life Sciences" complex, initially a collaborative effort with Beth Israel Deaconess Medical Center, to essentially replace the Enders research building. This plan will thus have a substantial impact not only on the hospital's future but on that of neighboring institutions as well.

Although I remain concerned about the logistics of this planned development, I have been convinced by compelling arguments from hospital representatives that the projects in this IMP are ultimately necessary and desirable, not only for the hospital's patients and workers but for the city as well. Against the almost certainly growing demands and burdens on Children's Hospital in the future, the planned reconstruction is actually conservative, answering needs that are

already pressing. I can agree with them that the planned projects are vitally necessary to maintain the financial health and competitiveness of the institution, which is an extremely important asset to the City of Boston.

In task force meetings to date, several issues have been raised about this plan, and more generally about the relationship between Children's Hospital and the city. In particular, the wisdom of additional hospital construction in an expensive and congested area was questioned, as was the value to city residents of the continuing evolution of Children's into a tertiary care center, with various primary and ancillary care functions increasingly sited in satellite facilities. Questions were also raised about the financial contributions of the hospital to the city, both in terms of annual payments in lieu of taxes and "mitigation" and related payments to compensate the local community and the whole city for added burdens imposed by the proposed construction. Additionally, task force members debated the nature and merits of a prior agreement between the city and the hospital about building a park on Binney Street, flanking the hospital's main building, on a spot currently occupied by a temporary office building.

It is a foregone conclusion that Children's Hospital's future development will require an increasing concentration of tertiary-care facilities in its main campus, with progressive "spinning off" of primary and other lower-intensity functions to suburban facilities, as part of a continuing process of hospital consolidation, with a continuation of the gradual evolution of the institution into a regional center for children's care at the hub of a regional network of affiliated physicians. This evolution has been occurring everywhere, but Boston has been a unique beneficiary of the process. In this case, the increasing specialization of the main Children's Hospital complex will benefit the entire state, but it will be especially valuable to residents of the city, who will have direct access to a local facility that just happens to be a world-class medical center with an unparalleled array of highly-trained specialists. The concomitant expansion of the hospital's emergency department will enhance local residents' immediate access to these specialized facilities. For this reason alone it is in the city's interest to accommodate the hospital as much as possible in its expansion plans in the difficult environment of the LMA.

Children's Hospital currently contributes to more than 200 local community organizations and related causes, and pays substantial sums to the city for the services its employees use. While this might seem to be in the public interest, in reality it is an inappropriate burden and an improper diversion of resources for an institution whose focus is perhaps the highest social priority of all: the care of sick children. Every dollar diverted to such outside purposes is a dollar that is not spent on the hospital's primary mission. I would urge that all of the money coming into the hospital be used for what it does best, and that what it is required to spend on "community outreach", etc., be spent in programs more directly under the hospital's control on health care for local children. The burden that the hospital's employees impose on the area's transportation system, etc., should be balanced against the substantial sums the hospital pays, for instance, largely through MASCO, to counterbalance those burdens with shuttle buses. In other regions of the country, city leaders ask non-profit institutions how they can help to improve the institutions' competitive advantage. Here in Boston, we present them with a bill and require that they pay penance for their expansion with "mitigation" funds. When the projects are owned by a private developer, this might be appropriate. For Lyme Properties' proposed complex, I viewed these payments as both proper and desirable, something that could be built into their profit equation. It is much more questionable to impose similar burdens on non-profit

institutions. For Children's Hospital it is particularly inappropriate. When you strip away the bureaucratic euphemisms, payments in lieu of taxes are taxes, just the same, and in this case are taxes on health care for children, which is a monstrous perversion of public policy. To those with good intentions who would require that the hospital contribute to a laundry list of laudable causes, I would ask, "where do you think the money is going to come from?"

Finally, although opposition to a park might be considered as bad as being against motherhood and apple pie, I would argue that the hospital's agreement to plunk some trees and grass in its shadow on Binney Street is a bad compromise that should be set aside. It is emphatically in the public interest to have the hospital fully utilize the confined space in the corner of Binney Street and Longwood Avenue for clinical facilities that are built to maximum efficiency with the largest possible floor areas. A cramped little park in this spot would be a waste of space in the middle of a zone of loading docks and heavy traffic; I would worry that children using it might be exposed to high levels of carbon monoxide; it was observed by task force members that trees would have difficulty growing in this location because of underlying utility lines, etc. There are other possibilities, in the long term, for more meaningful green spaces in other locations in the area that Children's Hospital can participate in creating. This is a goal I am committed to helping to achieve as development rolls forward in the LMA.

Respectfully,

Edward D. Lamperti

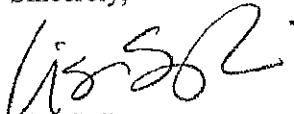
Ed Lamperti
370 Longwood

Children's Hospital plays an important role in the health care of Boston's residents and is a major employer of Boston's residents as well. Children's Hospital has been a lead participant in the Training Institute, a program co-sponsored by Fenway CDC, Jamaica Plain NDC and Mission Works. Many hospital employees, many of whom are local residents, have benefited greatly from the training and have advanced in their careers at Children's Hospital. We salute Children's Hospital for their efforts. One consistent problem with the Training Institute that the sponsors have noted is the low participation of residents of the three sponsoring communities. Children's Hospital, while drawing a large proportion of its staff from Boston, does not employ Fenway, Jamaica Plain and Mission Hill residents to the numbers we would like to see. We would like to work with Children's Hospital to increase local recruiting within the three bordering neighborhoods.

Finally, another way to help connect residents with jobs is through providing employee housing in the local communities. Just as Harvard has partnered with Fenway Ventures to house its residents nearby, we urge Children's Hospital to develop affordable housing for its staff and residents. Children's Hospital will be required to make linkage payments into the city's Housing Trust. We urge Children's Hospital and the City of Boston to designate a substantial portion of those payments be directed to the Fenway community since all the new parking will be located here. As an experienced developer of mixed-income housing, the Fenway CDC is an eager partner to help meet the housing needs of Children's Hospital's employees.

We look forward to continue working with Children's Hospital throughout the approval process of its IMP/PNF.

Sincerely,



Lisa Soli

CC: Sheneal Parker, President, Fenway CDC
Carl Nagy-Koechlin, Executive Director, Fenway CDC
Charles Weinstein, Children's Hospital
Kate Weldon LeBlanc, Children's Hospital



Phone (617) 566-6565
Fax (617) 566-1440

April 2, 2007

Sonal Gandhi
Senior Manager Economic Development
Boston Redevelopment Authority
Boston City Hall
Boston, MA 02201

RE: Children's Hospital Boston - Institutional Master Plan
Project Notification Form

Dear Ms Gandhi:

The Neighborhood Planning and Review Committee of Mission Hill Neighborhood Housing Services has reviewed the proposed Children's Hospital Project Notification Form and wishes to offer our support for the Main Building Inpatient Expansion project and IMP along with the following comments.

IMPACTS:

Traffic

- The entrance to Children's Hospital serves many different purposes including pedestrian, vehicular, and emergency access. Since the project is within this same area, the project should include a detailed analysis of Longwood Avenue intersections, vehicular and pedestrian traffic patterns, trips, volume, etc. Options should be presented to the project's Task Force that will mitigate the impacts from this project and proposed buildings in the IMP.

Construction

- Construction of the proposed building will have an impact on Longwood Avenue. Since the proposed building is an addition, construction constraints and challenges will create greater impacts on the immediate and potential on the abutting community. To address these ongoing construction and community issues Children's Hospital should form a Community Construction Mitigation Task Force representative of the immediate and surrounding residential community. This Task Force should be formed to review and assist with the creation of the project's Construction Mitigation Plan. The Plan should include specific solutions to address the impact from construction vehicle deliveries, truck staging and lay-down areas, noise and dust, construction worker parking, etc. The Plan should address the issues of pedestrian safety during construction and identify any street and sidewalk takings during construction. This Task Force should meet periodically during the construction of the project to monitor the Plan and report impacts and deficiencies.

COMMUNITY BENEFITS:

Housing

- With the dramatic increase in existing rental housing being occupied by students from local colleges and institutions the need for additional affordable family style housing in Mission Hill has never been greater. To assist with meeting this need for more affordable housing in Mission Hill the housing linkage payments for this project should be allocated to the impacted neighborhood of Mission Hill. Housing funds should be disbursed as housing creation agreements to designated projects in Mission Hill. To increase homeownership affordability, Mission Hill Neighborhood Housing Services would like to discuss with Children's Hospital and the City of Boston a housing creation agreement for our project at Parcel 25.



April 2, 2007

Sonal Gandhi
Boston Redevelopment Authority
One City Hall Square
Boston MA 02201

Re: Children's Hospital IMP and PNF

Dear Ms. Gandhi

We welcome this opportunity to comment on Children's Hospital's future plans for its campus. Institutional expansion has a significant effect on the surrounding neighborhoods and it is helpful to include neighborhood organizations in their planning.

Fenway CDC is a neighborhood-based organization devoted to enhancing the stability, sustainability and diversity of the Fenway neighborhood of Boston by providing opportunities for all Fenway residents, particularly those of limited means, to thrive in the community. We accomplish this by developing affordable housing, linking neighbors with jobs and training opportunities, providing services to families and elders, and organizing residents to have a strong voice in their community's future. We are a membership organization with approximately 500 dues paying members.

Children's Hospital's Institutional Master Plan and the planned project both call for additional parking in the Fenway neighborhood, both on and off campus. While we are sympathetic to the hospital's mission of serving sick children and the need to bring them and their families to the hospital, the Fenway has the highest incidence of asthma in the city of Boston, among both children and adults. There is good scientific evidence linking asthma with auto exhaust. Each additional car into the neighborhood aggravates the problem. We ask Children's Hospital to toughen its restrictions on employee parking in the Fenway. We further call on Children's Hospital to step up its efforts on lobbying for the Urban Ring transit connector in the Longwood Medical Area. We'd like to see an underground link from Children's Hospital's planned new parking garage to an Urban Ring station.

The Fenway CDC has long engaged the Longwood Medical Area hospitals in its "Walk to Work" program and through our collaboration in the Health Care and Research Training Institute. "Walk to Work" is one of the cornerstones of the Urban Village vision for the Fenway community. The Urban Village was a community planning effort that calls for the Fenway to become more pedestrian friendly. The Fenway is already the least auto-reliant neighborhood in Boston. Children's Hospital has been an exemplary partner in our community workforce initiatives. Still, we'd like to see more community residents working at Children's Hospital. Some portion of the Job Linkage funds generated by the project should be directed towards programs that address this goal.

**FENWAY
COMMUNITY
DEVELOPMENT
CORPORATION**

**73 Hemenway Street
Boston, Massachusetts
02115**

**Telephone
617 267-4637
Facsimile
617 267-8591**

**BUILDING
A BETTER FENWAY
SINCE 1973**

Sonal Gandhi
April 2, 2007
Page 2

Workforce Development and Mission Hill Agency Support

- Five organizations (ABCD Parker Hill/Fenway Neighborhood Service Center, MissioSafe, Mission Works, Sociedad Latina, and Mission Hill Neighborhood Housing Services) with over 25 years of service to the Mission Hill community recently formed the Mission Hill Jobs Collaborative (MHJC) with the purpose to provide workforce training services to increase employment for Mission Hill youth and residents at LMA institutions. The MHJC has formed a partnership with the Boston Health Care and Research Training Institute (TI) to provide specific pre-employment training services with funding from LMA institutions. We request that Children's Hospital support the MHJC/TI request for funds for these pre-employment training services.
- To maximize outreach and the opportunity for employment for Mission Hill residents at Children's Hospital we request that Children's Hospital's existing career development and education training initiatives be focused and directed to the Mission Hill neighborhood, schools, community-based organizations, and agencies.
- The member organization of the Mission Hill Jobs Collaborative provide a number of non workforce services and programs to residents of Mission Hill. These programs directly relate to the health and safety of our community and the LMA. We request that programs such as Sociedad Latina's Fitness & Nutrition Program and Youth NOISE receive funding and support from Children's Hospital. Staff for outreach, recruitment, and mentoring are essential to assist with promoting youth health and reducing youth violence.

Open Space

- We understand that the City of Boston and Children's Hospital are discussing the demolition of 57 Binney Street and a prior commitment to create a park at this location. If it is decided to use this site for uses other than a park to support Children's Hospital, Mission Hill Neighborhood Housing Services proposes that funds used to create the park at 57 Binney Street be used to support the operation and maintenance of the Kevin W. Fitzgerald Park (formerly Puddingstone Park). The Kevin W. Fitzgerald Park is a 5.5 acre passive park opened in June 2004. This Park is the largest privately owned park in the City of Boston. It was created with paths, benches, and open space for the enjoyment of the neighborhood of Mission Hill, employees of the Longwood Medical Area, and residents of the City of Boston. We would be happy to meet with you and representatives from Children's Hospital to discuss our request for the Park.

We look forward to working with Children's Hospital and the City of Boston as this project moves through the approval process to address the impacts and to maximize the project's benefits to Mission Hill residents. We thank you in advance for your consideration of our comments and requests.

Sincerely,


James Hoffman
Executive Director

cc: Will Onuoha, Mayor's Office
Representative Jeffrey Sanchez
Councilor Michael Ross



March 29, 2007

Sonal Ghandi
Senior Management Economic Development
BRA
Boston City Hall
Boston, MA 02201

RE: Children's Hospital

Dear Ms. Ghandi,

Sociedad Latina wishes to offer the following comments on the proposed Children's Hospital development plans. We look forward to working with the City and Children's Hospital as this project moves through the process to minimize construction and other impacts of this project and to maximize benefits to Mission Hill residents and programs.

Community Benefits:

Unique Rhythm Dance Fitness & Nutrition Program: According to the Centers for Disease Control, 24% of high-school students in Massachusetts are overweight or at risk of becoming overweight. Twice as many Latino and African American students fall into this category than do white students. In 2005, almost 30% of high school students reported that they had not participated in any vigorous or moderate physical activity. There are few facilities in the Mission Hill community that are working to challenge these troubling statistics.

In existence since 2001, Unique Rhythm is a youth-led program that promotes physical activity and healthy eating using the art of dance to physically engage young people. Unique Rhythm promotes physical activity for traditionally non-active youth using an intervention that they are fond of: Dance. Teens ages 14-18 employed as Health Educators engage in dance fitness and receive training from certified nutritionists about the importance of eating soundly, and also discuss how consumer choices are driven by the advertising practices of the food industry. Health Educators in turn provide interactive workshops on nutrition and fitness education including providing information on healthy versions of cultural recipes to promote healthy lifestyle to other youth in Sociedad Latina programs, at various after-school and youth programs throughout the city, as well as to parents. As the Health Educators pass along this information, they increase their self-esteem and leadership skills through planning all facets of the program including developing and facilitating trainings, choreographing original dance pieces that encourage participants to feel comfortable with their bodies, and speaking in public.



Youth NOISE: As murder rates soared during the summer of 2006 and as tension between the police and minority communities grew, Youth Community Organizers from Sociedad Latina set to work on creating a way to decrease violence through improving relationships among youth in the community and building relationships with police. Youth Neighborhood Outreach for Inner Street Empowerment, better known as Youth N.O.I.S.E., brings together youth from various Mission Hill/Roxbury housing developments and youth organizations, along with Boston's Area B2 police officers, to address issues of community safety including inner neighborhood turf tensions and youth/police interaction. The Youth NOISE initiative brings neighborhood youth to the table in addressing violence in their neighborhood as they build relationships with other youth and the police—working to bring youth voice to public discussion on violence.


To address these issues, we are requesting that Children's Hospital direct community benefit dollars in the amount of \$20,000. per year over a three year period for a total of \$60,000. to Sociedad Latina's Unique Rhythm Fitness & Nutrition Program and Youth NOISE.

The monies allocated will support Unique Rhythm and Youth NOISE in the following ways:

- Support a full time Program Coordinator that will oversee the Unique Rhythm Health Educators and all facets of the dance fitness and nutrition program
- Support 6 Health Educators to provide dance fitness and nutrition classes to youth and adults in the Mission Hill neighborhood and throughout the city of Boston
- Support a full time Program Coordinator that will oversee the Youth Community Organizers and all facets of the Youth NOISE initiative
- Support 6 Youth Community Organizers to outreach, recruit and facilitate Youth NOISE meetings and work with Area B2 Officers

We thank you in advance for your consideration of our comments and request.

Sincerely,


Alexandra Oliver-Davila
Executive Director
Sociedad Latina


Tatiana Cortes
Youth Community Organizer
Sociedad Latina



March 30, 2007

Boston Redevelopment Authority
One City Hall Square
Boston MA 02201
Re: Children's Hospital Contemplated Institutional Master Plan

Dear Sonal Gandhi and Members of the Authority:

Fenway Civic Association is the Fenway's only all-volunteer community organization, with a proud 44-year history of civic involvement. As a participant in the community review process of Children's contemplated institutional master plan, we would like to share the views of our constituency, the residents of the Fenway neighborhood.

Construction Planning and Logistics

All construction transportation access should be planned and adhered to with a minimum of disruption to local residents. One recent challenge to the viability of the neighborhood and our cherished institutions has been the illegal use of the parkways by construction vehicles, including heavy trucks. Please take special care to assure that your vendors adhere to designated and legal haul routes, which are never to include illegal use of any of the neighborhood parkways.

The Area at 57 Binney Street Subject to the 2001 Cooperation Agreement

While the community would welcome the establishment of a park on this site, the large economic and operational value of that land to Children's as additional build-able land is appreciated. Given that parks are an essential part of the neighborhood as outdoor living space, as well as healing space for the families and patients for our institutions, we strongly believe that any remediation considered in exchange for a modification or cancellation of the 2001 cooperation agreement should consist, in part, of the following:

- A contribution of \$650,000 (the expected construction cost + maintenance cost for five years of a potential park on 57 Binney) to endow the upkeep and maintenance of existing successful parks in the neighborhood, as follows—
 - 2/3 to the Justine M. Liff Endowed Maintenance Fund for the Emerald Necklace, via the Emerald Necklace Conservancy
 - 1/3 Ramler Park Endowed Maintenance Fund, via the Friends of Ramler Park

- Streetscape improvements along Binney Street, including widened sidewalks, greenery, and benches for pedestrians.

Construction of New Parking Spaces

The neighborhood would expect that Children's adhere to the guidance of recent neighborhood zoning as it concerns the construction of new parking spaces.

Transportation Improvements

Children's should actively work with other neighboring institutions, including via MASCO, to consolidate shuttle services, to continue to transition to CNG-powered vehicles and to make existing shuttle service more widely accessible. Improvements should also include improved signage for riders in the neighborhood, as well as *gratis* use of the transportation by anyone with a valid ID from a Longwood institution.

Thank you for your consideration

Yours truly,

Bill Richardson
For the Board of Fenway Civic Association



MEDICAL ACADEMIC AND SCIENTIFIC COMMUNITY ORGANIZATION, INC.

People / Places / Plans / Future

March 30, 2007

Ms. Sonal Gandhi
Boston Redevelopment Authority
One City Hall Square
Boston, MA 02201

RE: Children's Hospital Boston's Institutional Master Plan Notification Form/Project Notification Form (IMPNF/PNF)

Dear Sonal:

Children's Hospital Boston's IMPNF/PNF gives a good overview of the hospital's mission, current level of involvement with community programs, physical campus and programmatic goals. Projections of need for new inpatient and outpatient beds and patient care support services are clearly compelling justification for the modest net new increment of space of 129,605 square feet.

As the hospital prepares its Draft Project Impact Report (DPIR), it would be useful for them to include the following additional information and analysis:

- Through the design of the Main Building Patient Expansion and the new Patient Care Center, the hospital has an opportunity to design loading facilities that will accommodate, off-street, a variety of truck delivery vehicles. We hope they will consider: designing capacity for trucks to drive in and out of the facilities instead of backing in and out, due to the associated traffic impacts with the latter operation; off-peak, evening or early morning delivery schedules; and just-in-time or small truck deliveries, to reduce impacts on a busy Binney Street.
The creation of patient/visitor parking on the south side of Longwood Avenue, adjacent to patient care space, instead of across Longwood Avenue, is a smart idea which theoretically should lead both to reduced congestion in the main entrance area as well as congestion related to multiple valet trips across Longwood Avenue. The DPIR should include an analysis of the location of all patient/visitor parking and valet operations now and in the future.

- As the hospital focuses new outpatient expansion in Waltham, it would be useful to understand the relationship between the Waltham and

Member Institutions

- Beth Israel Deaconess Medical Center
Brigham and Women's Hospital
The CBR Institute for Biomedical Research
Children's Hospital Boston
Dana-Farber Cancer Institute
Emmanuel College
Harvard Medical School
Harvard School of Dental Medicine
Harvard School of Public Health
Isabella Stewart Gardner Museum
Joslin Diabetes Center
Judge Baker Children's Center
Massachusetts College of Art
Massachusetts College of Pharmacy and Health Sciences
Massachusetts Department of Mental Health
Simmons College
Temple Israel
Wentworth Institute of Technology
Wheelock College
The Winsor School

Associate Members

- Harvard Vanguard Medical Associates
Merck Research Laboratories

Longwood campuses in terms of needs for transportation interconnectivity for patients, doctors and staff.

- The State is studying the potential for future Urban Ring service via a tunnel under Longwood Avenue, to improve the accessibility of the Longwood area via new transit services. It would be helpful for the hospital to develop its architectural plans for the buildings proposed in the master plan, in coordination with the emerging dimensional requirements for the tunnel.
- Binney Street is currently fairly devoid of greenery due to the existence of utility tunnels under the sidewalks on the west side. As the hospital develops site plans, wherever possible, accommodations for street trees on the east side would improve the quality of the pedestrian environment for all pedestrians, patients and visitors in the area.

Thank you for the opportunity to comment.

Sincerely,



Sarah J. Hamilton
Vice President, Area Planning and Development

Cc: Charles Weinstein, Children's Hospital Boston
Paula Quan, Children's Hospital Boston
David Peck, Children's Hospital Boston

To Whom This May Concern:

We are writing in regards to two important community programs in Mission Hill. The first is *Youth NOISE* (Neighborhood Outreach for Inner Street Empowerment), a gathering of Mission Hill youth with a purpose of providing a safe and respectful forum for addressing issues, concerns and criticisms of the community. The *youth NOISE* program was founded by youth from Sociedad Latina and Mission SAFE, two organizations in the Mission Hill area. The program holds monthly meetings on a wide variety of topics ranging from gang and school violence to leadership and community involvement. Discussions encourage youth from both groups to participate and collaborate on creative and practical solutions to critical problems. Without *youth NOISE*, inner street teens who want to express their issues and ideas would not have an outlet to do so. This would be a disservice not only to the adolescents who passionately participate, but also to the larger community that would benefit from their ideas.

The second is *Unique Rhythm*, a program composed of youth leaders from Sociedad Latina that uses dance and the performing arts to promote healthy lifestyle choices. The program teaches participants health facts regarding nutrition and fitness. Through creative new dances inspired from various cultures (including salsa, jazz, and hip-hop), *Unique Rhythm* provides a novel approach to encourage healthy living habits while having fun. In addition to rehearsals and performances, the youth collaborate and train with The Center for Young Women's Health and The Medical Foundation. Most importantly, *Unique Rhythm* fosters a nourishing and friendly environment in which the youth can grow and learn from one another.

It is therefore crucial for *youth NOISE* and *Unique Rhythm* to continue playing their vital roles in our community. For these reasons and more, we are kindly asking for your support to maintain and improve the programs. Funding for *youth Noise* is essential in order to provide resources for the youth staff, including program materials like flyers, transportation costs to meetings and conferences, promotional uses, and salary for the youth leaders. As for *Unique Rhythm*, funding is essential for costumes, health information textbooks and brochures, travel costs, dance space and professional choreographers. With your help we will certainly experience an increase in youth support, resulting in a spread of the programs' ideals and positive influences throughout the city of Boston.

Thank you for your attention.

Sincerely,

youth NOISE and *Unique Rhythm* Youth Leaders
Sociedad Latina, Inc
1530 Tremont St.
Mission Hill, MA 02120

To Whom This May Concern:

Unique Rhythm is a group of youth leaders at Sociedad Latina who dance and perform in Mission Hill and other places. Unique Rhythm also focuses on nutrition and fitness. They go to an after school program and teach youth about health facts and also teach them dance techniques. The health facts are learned from trainings that they attend every Thursday by The Center for Young Women's Health and by The Medical Foundation which they attend every other Sunday.

The program Unique Rhythm should be supported because it educates the participants in Unique Rhythm about health and dance. This helps them to educate others such youth in the neighborhood of Mission Hill about important nutrition and fitness facts. It is important for people to know about nutrition and fitness in order to become fit and stay healthy. Within the health aspect of the Unique Rhythm program, they focus on researching facts on health tips in order to stay fit, facts on how to stay healthy and they also come up with their own exercise routines which follow the fitness facts researched.

Unique Rhythm dancers learn new dances while having a good time. The dance group feels there should be a vast diversity in each dance they perform in order to appeal to different audiences. Therefore, they always try to include dances that aren't usually seen, giving a new style to their audiences' eyes. This sets them apart from many other dance groups because in one performance they will do at least two different styles, some examples are, Salsa, Jazz, Break Dancing Hip Hop, and African dances. Most of all, Unique Rhythm enjoys the fact that as they grow together, they become more and more like a family with every practice and performance they do. In conclusion, we would like you to support our program Unique Rhythm because it helps to educate the community on different dances and health and fitness topics.

Thank you for taking the time out of your schedule to read this letter.

Sincerely,
Sociedad Latina Youth Leaders ☺

**APPENDIX 3
COMMENTS FROM THE PUBLIC**



Charles River Watershed Association

Boston Redevelopment Authority
One City Hall Square
Boston, MA 02201

Attn: Sonal Gandhi

March 30, 2007

RE: Institutional Master Plan Notification Form (IMPNE)/ Project Notification Form (PNF) for Children's Hospital

Dear Ms. Gandhi

Charles River Watershed Association has reviewed the IMPNE / PNF for the above referenced project. There are several project elements that we believe need further analysis and discussion in the Draft Project Impact Report (DPIR) and should be included in the BRA's Scoping Determination for the IMP in order to ensure that all environmental impacts have been minimized and mitigated. We hope these comments will assist the BRA and Children's Hospital as the planning process moves forward.

Stormwater Management

It is our understanding that the stormwater from this site drains, via the Boston Water and Sewer Commission's (BWSC) municipal storm drain system, into either the Muddy River conduit and out to the Charles River; or, during larger storm events, into the Muddy River Fens and then out to the Charles River via Charlesgate. In either case, stormwater from the site enters and impacts the Muddy River and its drainage network.

As you are undoubtedly aware, there are significant and long-standing flooding and water quality problems in the Muddy River. The US Army Corps of Engineers is currently in the process of designing a dredging and environmental restoration project for the entire Muddy River that is estimated to cost well over \$60 million. The Muddy River Restoration project is needed to reduce significant flood hazards, to improve water quality, to restore degraded habitat, and to remove sediments that have accumulated in the Muddy River. Most of these problems are a direct result of stormwater discharges into the Muddy River.

Any redevelopment that is proposed in areas that drain directly into the Muddy River system, therefore, needs to focus carefully on stormwater management issues, and should maximize opportunities to reduce peak storm flows, minimize imperviousness, maximize infiltration and capture sediments. The significant expenditure that will be made by the federal and state government, as well as by the City of Boston, to dredge and restore the Muddy River must be protected to the maximum extent possible.

The IMPNF/PNF indicates that Children's Hospital will submit a stormwater management plan to BWSC and work with them on meeting stormwater quality goals. It is our hope that the IMP and DPIR will study various alternatives to enhance stormwater management on the site so as to demonstrate how improvements will be made over the existing conditions.

We feel that the Article 80 project impact review is the appropriate process for a full analysis of the stormwater management program. The IMP and DPIR should therefore include specific, detailed information and alternatives analyses of stormwater management on the site. Stormwater management should aim to maximize infiltration, slow runoff from the site, maximize the use of vegetation, capture rooftop runoff for irrigation and non-potable water uses, and minimize sediment and nutrient loading. We suggest that the IMP and DPIR include more documentation about the proposed stormwater management program including:

- 1 Detailed information about the final design of the proposed stormwater management infrastructure including the location and design of drains, catch basins, water quality structures, and infiltration structures;
- 2 Detailed information about any surface stormwater management features such as swales, vegetative filter strips, rain gardens, permeable pavement or vegetated storage areas;
- 3 An assessment of the opportunities to reduce even further the peak flows and volume of stormwater runoff, including estimates of the impacts in a one-year storm;
- 4 An assessment of how the site could meet DEP's stormwater management policy in its entirety
- 5 A plan to minimize the primary pollutants of concern for the Muddy River, sediments and nutrients;
- 6 A maintenance plan for the stormwater management plan.

Groundwater

This project proposes a below grade, 350 space parking facility as part of the Patient Care Center. While there are many significant aesthetic benefits to underground parking, there are important environmental issues both during and post- construction that need to be addressed. The location of this project in an area of historic fill, and the ongoing problems throughout many areas of the City with groundwater levels, make it all the more important that this aspect of the project be designed with the utmost care and in anticipation of any potential impacts.

The project needs to be designed to minimize groundwater impacts from the project, and the proponent should commit to working closely with abutters and the Boston Groundwater Trust to ensure that there are no alterations to groundwater levels as a result of the project. Since the project site is on the border of the City's "Groundwater Conservation Overlay District (GCOD)", the project should aim to achieve similar recharge standards as required by the City for projects within the GCOD. Investigations should also include the potential seasonal changes in groundwater levels, as well as potential effects on groundwater flow. In some areas of Boston, construction of sub-surface projects such as tunnels, underpasses and even some building foundations have altered groundwater flow patterns, resulting over time in changes to ambient groundwater levels. Groundwater flows are extremely slow so alterations may occur over years.

The DPIR should include an assessment of groundwater flow directions, as well as a determination of whether those directional flows change seasonally. If the project shows any potential for altering flows, either slowing or reducing flows into the Muddy River, or conversely reducing flows back into the ground during periods of high groundwater, or causing any groundwater "mounding," the DPIR should document a mitigation plan for any such alterations. In addition, the DPIR should specify what source of water would be used should groundwater recharging be necessary during or after construction.

If proponents determine opportunities for on-site infiltration of stormwater to be minimal, the DPIR should evaluate the possibility of seeking off-site locations for groundwater recharge and stormwater infiltration. Finally, a detailed plan for the treatment and disposal of water from dewatering activities should be included in the DPIR.

Impacts to the Emerald Necklace

The project will increase not only the vehicular traffic in the area, but also the number of pedestrians, and will likely increase the use of the Emerald Necklace Parks, including the Fenway. This park system is already heavily used, and is in need of significant capital and operations improvements.

We suggest that Children's Hospital work with the BRA, the Boston Parks and Recreation, the Medical Academic and Scientific Community Organization (MASCO), the Fenway Alliance, and the Emerald Necklace Conservancy to develop a program to support the improvement of maintenance and management of the park system to mitigate this increased use and to provide support for the community-wide effort that is underway to bring this park system up to an acceptable community standard. This contribution could be made as a linkage payment (as a part of the public benefits package) or through the implementation of a specific capital improvement project for improving access to and maintenance of the park or for environmental restoration projects in the LMA as a whole.

Sustainable Site and Building Design

While there is some discussion on measures for energy conservation and sustainable design in the IMPNF/PNF document, there are no specifics provided on what kinds of best management practices and technologies will be incorporated at the building, the individual site and the overall campus level. The Scoping Determination for the IMP and the DPIR need to explicitly define what the project aims to achieve in terms of standards for environmental sustainability on the three levels mention above as well as how the project will determine indicators for sustainability. While the LEED system provides one suite of metrics for incorporating green building standards and requirements, if the proponent feels that given the programmatic constraints of the building LEED might not be an appropriate system to follow, the Green Guide for Health Care might provide a more suitable framework.

In addition to fulfilling requirements related to stormwater management on site, the green building standards should be adopted for wastewater reuse for flushing toilets, etc. (through double plumbing the building) as well as capturing, filtering and storing roof runoff. CRWA would encourage the proponents to design the proposed "Sanctuary" on top of the Patient Care Center to filter and capture roof runoff for the aforementioned non-potable water uses and to attenuate peak stormwater flows. CRWA suggests the roof area of the Patient Care Center be designed as a functional green roof to provide additional stormwater treatment and storage for later use. The addition of the top floors proposed in the main building patient expansion is a great opportunity to create another patient "Sanctuary" serving both patients' needs for respite, peaceful convalescence, and congregation and also providing stormwater treatment, peak flow attenuation and non-potable water use.

Be that as there is such a dearth of green / open space in the LMA as a whole, green roofs would not only provide cleaner roof runoff, reduce the urban heat island effect in the LMA, and reduce heating and cooling costs, but also provide an aesthetically pleasing amenity for the building occupants. Green roofs will also provide "metapopulation" habitats for birds and insects connecting species to larger, more sustainable urban wildlife corridors such as the Muddy and Charles Rivers.

This project offers a huge potential to expand the purview of green practices from individual building scale to looking a "greening of infrastructure" at an overall neighborhood level. Through retrofitting the entire campus area with Low Impact Development (LID) best management practices, the proponent can achieve a much larger impact than the cumulative impact of a collection of individual green buildings.

We appreciate the opportunity to provide comment on this project through the Article 80 review process. Please feel free to contact me should you have any questions.

Sincerely,

A handwritten signature in black ink, appearing to read 'DSK', written over a horizontal line.

David S. Kaplan
Water Resources Specialist

cc: Children's Hospital Boston
Medical Academic and Scientific Community Organization
Boston Parks and Recreation
Boston Groundwater Trust
The Green Roundtable
Muddy River Restoration Project MMOC

APPENDIX B – CHILDREN’S ANNUAL REPORT ON
COMMUNITY BENEFITS FISCAL YEAR 2006



Children's Hospital Boston



**Annual Report
On Community Benefits
Fiscal Year 2006**

**Submitted to
Division of Public Charities
Office of the Attorney General
Commonwealth of Massachusetts
February 28, 2007**

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Preface

Children’s Hospital Boston is guided by the values of innovation, optimism, and a devotion to pediatric care. These core attributes run throughout the hospital’s four interwoven missions: providing the best clinical care to children, researching new cures for diseases, training the next generation of pediatric caregivers, and improving the health and well being of children and families in Boston – all aimed at making Boston a better place to live, work, and play.

These four missions inform the hospital’s vision of local, accessible, and comprehensive care, summarized as “Healthy Children. Healthy Communities.” Inherent in this vision is the need to provide the full spectrum of care. By combining the medical model of care with the public health model of care, and by viewing patient care, teaching, research, community health, and public policy advocacy along a seamless continuum, Children’s hopes both to improve and redefine child health.

Within this context, Children’s community benefits reflect its strong commitment to community health. Children’s takes a wide view of community benefits, broader than that defined by the Office of the Attorney General. For Children’s, community benefit encompasses four broad investment areas. Every day, Children’s strives to improve the physical and mental health of children through innovative services, initiatives, and partnerships, all approached with a recognition and appreciation of the racial, cultural, and religious diversity of its community. Children’s also seeks to improve the civic health of the community in which it exists and serves. For Children’s, community benefit means that the hospital:

- 1) **serves as the community’s safety net** hospital by caring for patients regardless of ability to pay; offering family-centered services to ensure that families’ basic needs are met as they care for their children; and providing and supporting hospital and community-based subsidized services that are either not available or available in limited capacity, such as primary care, mental health services, dental care, or child protection services.
- 2) **focuses on the most pressing health care needs** of children and families in local communities – asthma, mental health, injury prevention, and fitness and nutrition. Children’s targets resources to develop and support innovative programs and initiatives in these core commitment areas.
- 3) **speaks out as a voice for children through public policy advocacy** to change laws that will lead to improvements in the health and the lives of children and families.
- 4) **supports essential community partners** – particularly community health centers, schools, and community organizations – to make Boston a better place for children and families, and a more vibrant and livable city. These partnerships include programmatic efforts aimed at improving child health more broadly, support for the city’s infrastructure for the delivery of health and social services, and acknowledging and acting on the hospital’s civic role and responsibilities.

Executive Summary

Children have unique health needs that simply cannot be addressed by the adult medical system. Their medical conditions, the type of care they need, and how care is delivered, differ significantly from adults.

Children’s Hospital Boston is the only hospital in Massachusetts with a singular focus on children and their special needs. And that singular focus is brought to its work with and in the local community. Known for excellence in patient care, teaching, and research, Children’s also strives to be a dedicated, enduring, and culturally sensitive community partner, a beacon of access to care for the poor, an accountable health-improvement organization, and a civic and public policy leader.

The hospital has encapsulated its vision for a system of care for Boston children – care that is local, accessible, and comprehensive – in a few simple words: “Healthy Children. Healthy Communities.” This vision is predicated on the hospital’s commitment to four fundamental “deliverables,” outlined below. This commitment also requires that the hospital expand the traditional medical model of care and combine it with a public health model of care to reach a new, more comprehensive definition of child health by providing the full spectrum of care – a seamless continuum that encompasses patient care, teaching, research, community health, and public policy advocacy. It requires the formation of deep and lasting partnerships with community organizations already engaged in improving the health and lives of Boston’s children and their families. It requires taking a very broad and long view – seeing children’s health, and the hospital itself, in the context of the environments children live in.

To begin to achieve this vision of “Healthy Children. Healthy Communities.” the hospital has reinvigorated its role and commitment to the community. For more than 130 years, the hospital has stood out as an example of excellence in pediatric patient care, teaching, and research. But providing superb hospital-based care is not enough.

Children’s Hospital also embraces its role as the community hospital for the children of Boston, and is the largest provider of inpatient and outpatient services to them. More than half of all children hospitalized in the City of Boston come to Children’s; nearly one-third of the hospital’s patients come from Boston and immediately neighboring towns. Children’s is the single largest provider of medical care to low-income children in Massachusetts; approximately 30 percent of the children the hospital cares for are uninsured or have coverage through public programs.

Children’s has recognized and must respond to the wide range of factors outside its doors that affect the health status of Boston’s children, and has a special commitment to the wellness of the city’s children. The hospital addresses these factors on four levels:

1. serving as the **community/safety net hospital** for the children of Boston
2. focusing on the **most pressing health care needs** and providing community-based care to address them
3. **speaking out as a voice** for children, through public policy advocacy, about the crucial, unmet needs of children, adolescents, and young adults.

4. **supporting community partners** to make Boston a better place for children and families, and a more vibrant and livable city

The Community Safety Net

Children's is the community's safety net hospital and the largest provider of medical care to low-income children in the state, so it is vitally important that the hospital maintain an open-door policy for all Massachusetts children, regardless of their families' ability to pay. To improve access to care and to enhance parents' ability to care for a sick child, the hospital provides an array of family-centered services, from parking to meal vouchers, and many others. In a health care infrastructure with so many flaws, it is critical for the hospital to do what it can to maximize access to services for those in need. Children's also provides, or supports others who provide, those vital, hospital-subsidized services that are either not available elsewhere or are only available in limited capacity, such as primary care, mental health services, dental care, or child protection services. *This is what we mean by providing a health care safety net.*

A Focused Commitment to the Most Pressing Community Health Needs

Children's is committed to helping children lead healthy, safe, and active lives; to ensure that they are ready to learn; and to encourage them to be engaged in the world around them. To accomplish this, the hospital must address the most serious health issues faced by the city's children. These problems – asthma, obesity, unintended and intentional injury, and mental illness – are best addressed by a coordinated, culturally sensitive, and child-centered program of prevention, treatment, education, and advocacy. By partnering with the local community to merge the medical model of care with a public health model, the hospital and its partners provide a continuum of needed services in these issue areas. This model has the potential to achieve some very important outcomes: true coordination within the systems of care, the ability to treat “the whole child” rather than episodic or discrete problems, and the ability to track and measure improvements in child health in targeted communities. *This is Children's approach to community health programming.*

A Voice for Children

Influencing public policy by working to change laws that will improve the health of children and families is an important aspect of the hospital's commitment to community health. As the critical safety net hospital for children throughout Boston, the Commonwealth, and the region, Children's recognizes its special obligation to engage in public policy activities that will ensure access to the services children need. *This is what we mean by speaking out about the crucial needs of children.*

Supporting Essential Community Partners

The hospital's community commitments are directed at improving the infrastructure of organizations that care for children and families in the city – supporting community partners and working with them to make Boston a better place for children and families, and a more vibrant and livable city. These supportive partnerships with community health centers, schools, and community organizations include programmatic efforts in the hospital's core commitment health areas and other areas aimed at improving child health more broadly, support for the city's infrastructure for the delivery of health and social services, and acknowledging and acting on the

hospital's civic role and responsibilities. *This is what we mean by supporting community partners.*

Promoting community health is one of Children's four core missions and one of its eight strategic goals. As such, community health, along with the hospital's patient care, teaching, and research missions, is monitored and measured against benchmarks for safety, effectiveness, timeliness, patient centeredness, efficiency, and equitability. This "quality dashboard" is based on a national model for measuring quality. Children's is among the first hospitals in the nation to include community health among its strategic goals and to measure results using the same rigors and benchmarks against which patient care quality is measured. The hospital also seeks to share its vision with a nationwide audience: children's hospital leaders from around the country heard of the hospital's community benefits commitment and experience through a panel presentation at the 2006 national conference of the National Association for Children's Hospitals and Related Institutions (NACHRI).

In pursuit of this extensive community health vision, the hospital's reach is broad and deep. In FY06, Children's provided an estimated 157,000 patient visits through hospital and community-based clinical services, and reached more than 13,150 children, youth, parents, and caregivers through programs and initiatives in community settings.

Providing a Patient Care Safety Net

Children's Hospital Boston is the leading provider of health care to low-income children in Massachusetts. For thousands of patients and families in this region, there literally is nowhere else to turn for the kind of care Children's provides. The hospital is committed to treating all pediatric patients from Massachusetts regardless of their ability to pay. Nearly 30 percent of the hospital's pediatric patients are Medicaid patients, and many of them are among the sickest children in the state.

Children's also is the safety net provider for the children of Boston. More than half of all children hospitalized in the City of Boston come to Children's; nearly one-third of the hospital's patients come from Boston and immediately neighboring towns. Beyond the provision of care, a major institutional priority for Children's is ensuring that care is available to patients regardless of their ability to pay and ensuring that needed care is accessible. Accordingly, the hospital has major programs in place to do so.

This safety net is both a financial and programmatic one: financial, in that the hospital provides free care, subsidizes care for Medicaid patients, and incurs bad debt for low-income patients; programmatic in that, as the community hospital for the city of Boston, Children's offers vital, hospital-subsidized services that either are unavailable elsewhere or are available only in very limited capacity, such as primary care, mental health services, dental care, or child protection services.

Providing A Financial Safety Net To Assure That No Child From Massachusetts Is Turned Away Due To Inability To Pay For Care.

The hospital makes aggressive efforts to help enroll children in health coverage through the Medicaid program, provides free care to qualified families who are ineligible for state assistance, and offers discounts to self-pay patients, regardless of income. In 2006, Children's reaffirmed this commitment by reviewing and updating financial and operational policies, and ensured that clinicians, billing specialists, and front line staff were knowledgeable about these policies, to help assure families are enrolled in health coverage programs and are identified when eligible for self-pay and discount programs.

Providing Family-Centered Services.

For a pediatric hospital, health care means caring for entire families, not just the children in the family. Children's Hospital focuses on providing culturally sensitive, family-centered care to help ensure the health of children, and to see that families are supported as they address their child's health needs.

Families with a sick child and few resources must have their basic needs met – everything from housing assistance or food vouchers for out-of-town families who must stay in Boston for extended periods to transportation for needy local families whose child must be seen regularly. The hospital maintains an Extraordinary Needs Fund for these and other safety-net purposes.

Because of its dual role as community hospital to children from surrounding neighborhoods and as a national and international referral center, Children's patients represent a variety of ethnicities and cultures. To help patients and families who do not speak or understand English well, the staff of the hospital's Interpreter Services Department provides culturally appropriate services in American Sign Language, Spanish, Russian, Cantonese and Mandarin Chinese, Portuguese, and Cape Verdean. Other languages are served by a pool of 100 freelance interpreters. In 2006, the Interpreter Services Department supported 80,000 interpreting encounters in more than 50 languages and dialects.

Children's seeks to enhance the capacity of parents to care for sick children in multiple ways. The hospital maintains extensive family support services, including social work, specially trained child life staff, and a Center for Families that serves as a resource hub for the patient community. These formal services "wrap around" the hospital's clinical programs to provide families with resources, counseling, advocacy, and support. In addition to more formal family services, the hospital also maintains several important targeted programs for families that need additional emotional and parenting supports. Through all these encounters, hospital employees and staff seek to ensure that programs and services for patients and families are respectful and accommodating to differences in language, culture, and religious beliefs.

For families who are just learning about the diagnosis of their child, the hospital coordinates a Family to Family Program, in which parents whose child already has the same diagnosis are trained to pair and connect with the families of newly diagnosed patients. In 2006, the program matched 20 families with trained volunteers.

Recognizing that some parents need additional family-like support, the hospital coordinates a Foster Grandparent Program, which trains older volunteers to spend time with young patients, offering services ranging from rocking babies to sleep to reading a book with a toddler.

Providing Essential Health Care Services.

Given the nation's fragmented health care system, access to needed services is not always assured. This is particularly true in urban areas, where services may be unavailable, incomplete, or uncoordinated. To improve access to care for urban core children and families, Children's provides and subsidizes an array of primary care and specialty care services on its campus and in community-based settings, services that might not be available otherwise or are only available in very limited capacity. Children's supports other community-based providers as they, too, strive to provide these important services to their patients and families.

Primary care services.

Through the Martha Eliot Health Center (MEHC), the hospital's community health center in Jamaica Plain, and the hospital-based Children's Hospital Primary Care Center (CHPCC) and Adolescent/Young Adult Medicine Program, the hospital provides a number of avenues for access to primary care services, which are a cornerstone of Children's community health efforts. In total, these programs provided more than 90,900 patient visits for traditional primary care as well as a wide range of services to address the health and social welfare needs of the patients and families served. Programs range from optometry, nutrition, and substance abuse to home visiting services, HIV education counseling and testing, and a youth street outreach program.

For more detailed information on the Martha Eliot Health Center, Children's Hospital Primary Care Clinic, and the Adolescent/Young Adult Medicine Program, see Appendices A, B, and C, respectively.

Psychiatric and Mental Health Services.

Children's Hospital's Department of Psychiatry, one of the leading providers of mental health services in Massachusetts, is working to expand access to mental health care for all children and families. Through hospital-based initiatives and partnerships with schools, community health centers, and several community-based organizations, the Department of Psychiatry is changing the environment of mental health care to ensure a brighter future for all children.

While the Department of Psychiatry provides more than 14,000 outpatient visits, 800 inpatient medical consultations, and 400 inpatient admissions on the hospital campus and through MEHC, the hospital recognizes that it cannot reach all children and families in need. Because lack of access to community-based mental health services is a significant barrier to needed care, Children's has provided funding and placed bilingual and multicultural child and adolescent psychiatrists in five community health centers. The addition of this level of expertise improves local access to child and adolescent mental health services and shortens waiting times for an appointment. The hospital also delivers care through prevention and wellness initiatives based in community health centers, in the schools, and in other community organizations, and funds and supports the Boston Public Health Commission's Child and Adolescent Mental Health Coalition, which addresses the stigma of mental health care.

For more information about the hospital's community-based mental health services, see page 14 and Appendix G.

Child Protection Services.

Through its Child Protection Clinical Services Program, Children's has a long history of prevention and treatment for victims of abuse and neglect. This program provides outpatient medical and psychosocial clinical assessment services to children who have been or are maltreated. The program's multidisciplinary team includes social workers, physicians, nurse practitioners, and psychologists. The team also offers highly specialized training to identify child abuse for other community agencies. The team's case load is an estimated 1,500 per year.

For more information on Child Protection Services, see Appendix D.

Dental Care and Oral Health Services.

The Department of Dentistry at Children's is dedicated to providing exceptional and comprehensive oral health care to infants, children, adolescents, and those with special health care needs while promoting and advocating for their optimal oral health. For example, Children's serves as an important safety net for children with developmental disabilities who frequently must receive even routine dental treatment in an operating room environment under general anesthesia. Overall, the department records approximately 22,000 patient visits per year, including surgical procedures. Of these patients, 65 percent are insured by Medicaid and nearly 40 percent of patients are from Boston.

The hospital’s dental program also reaches out into the community. Recognizing that there is a significant need for pediatric dental services in the community, Children’s financially supports the pediatric dental program at Dimock Community Health Center. To encourage early identification of oral health issues, the Department of Dentistry also offers educational awareness training to non-dental providers at MEHC and CHPCC.

Poison Control Services.

The Regional Center for Poison Control and Prevention, a not-for-profit organization based at Children’s Hospital, offers treatment and advice to health care professionals and the public on the medical diagnosis, management, and prevention of poisonings involving the people of Massachusetts and Rhode Island. Poisoning-related issues range from medication errors, ingestion of household products, and bites and stings to exposure to biologic and chemical substances. The center’s team of doctors, nurses, and pharmacists works to educate the public, collaborate with other professionals, and extend the reach of its poison prevention message.

The center handles more than 65,000 calls a year through its Poison Help Hotline, which is staffed around the clock. Calls originate primarily from residences, with others coming from health care facilities and medical professionals. In addition to the Hotline, the center provides emergency care and treatment, follow-up services, seminars on toxicology and poisoning prevention, educational resources and materials, expert consultation for complex poisoning cases, patient referral resources, and assistance in locating regional antidotes and unusual lab assays.

Community Health Center Services.

Community health centers are key allies in improving access to care and developing and implementing community health initiatives. While Children’s provides a wide range of services to improve child health, the hospital is by no means alone in engaging in this task. Community health centers play a vital role in the broader system of health care in Boston. In both the spirit and the reality of “it takes a village to raise a healthy child,” the hospital supports the work of these centers. It also relies on the expertise of providers and staff from community health centers to inform its programming and how to best reach the families in its target population.

The hospital relies on the expertise of providers and staff from community health centers to inform its programming and its outreach efforts. Children’s gains valuable input from its relationship with Martha Eliot Health Center and its affiliation with 11 other Boston community health centers:

- | | |
|-----------------------|------------------------|
| Bowdoin Street | South Cove |
| Brookside | South End |
| Dimock | Southern Jamaica Plain |
| Joseph M. Smith | Uphams Corner |
| Roxbury Comprehensive | Whittier Street |
| Sidney Borum | |

See the section on “Supporting Essential Community Partners” beginning on page 22 for more information on community health centers as well as Appendix E.

A Core Commitment to Community Health

Asthma, Mental Health, Injury Prevention, Fitness and Nutrition

The concept of “Healthy Children. Healthy Communities.” requires the hospital to work in and with its community on those issues most important to improving the health of local children and keeping them out of the hospital when possible. In 2004, the hospital engaged in a comprehensive “audit” of community leaders and residents to determine their children’s most pressing health needs. That information, plus a review of public health data, showed that asthma, mental health, obesity, and prevention of injuries were the most pressing and prevalent health needs for Boston children, particularly in the neighborhoods of Jamaica Plain and Roxbury, the same geography served by the Martha Eliot Health Center. In 2006, another comprehensive needs assessment was completed including focus groups of community residents, and it reaffirmed the areas of most concern while pointing to specific needs within the four core programs.

To make a difference in these core health issue areas, the hospital builds on its base of expertise in providing clinical care by leveraging the expertise of community partners in providing prevention, wellness, and education services to children. This merging of the medical model of care with the public health model of care helps ensure that health care and public policy advocacy for children is better coordinated and that the community is engaged and invested in the goal of improved child health. By combining these two care models, the hospital seeks to create a seamless continuum encompassing patient care, teaching, research, community health, and public policy advocacy. With this full spectrum of care, Children’s is better equipped to improve and even redefine child health in Massachusetts and beyond.

Achieving these goals demands not only a commitment of resources, but the ability to prove that those resources, effectively applied, are making a difference. The hospital’s core commitment to community health seeks to do just that – to track and document measurable improvements in child health in select communities over time. To that end, the hospital’s community health effort includes an evaluation component, whose goal is to measure the quality and effectiveness of the hospital’s overall “Healthy Children. Healthy Communities.” initiative. Ultimately, evaluation will encompass not only program-specific progress toward making a difference in the lives of local children and families, but also the quality of programs and the hospital’s success in building community capacity to help sustain the progress made.

All this work is pursued with the goal of integrating the hospital’s programs with others in the city and partnering in program development and delivery whenever possible.

Asthma

Asthma is the leading cause of hospitalization at Children’s. The hospital is the largest provider of clinical services to children with asthma in Massachusetts, with almost 16,000 inpatient and outpatient visits for asthma as a primary or complicating diagnosis in FY06.

Changing these statistics requires an all-out effort, combining patient care, research, training, community health and education, and public policy advocacy all directed toward reducing the

burden of this serious chronic, but very manageable, disease. Children's has focused its programs to improve asthma management in a child's everyday life. With supportive resources and education, children with asthma can lead healthy and active lives.

Direct services are provided for inpatients (through the Emergency Department or the Short Stay or Intermediate Care units) and outpatients (through the Primary Care Center, Adolescent Medicine, Pulmonary Clinic, and Allergy/Immunology Department).

The hospital is one of a few "centers of excellence" for asthma **research** in the U.S., having received a \$1.2 million annual NIH grant to establish an Asthma and Allergic Disease Research Center. Immunology research – understanding the immune mechanisms involved in asthma – is a prime focus. Current research projects include studies on the role of certain cells in the effective treatment of asthma and on mouse and dust allergens in the home and in school settings.

In addition to **training** research fellows, the hospital provides ongoing training to medical residents, staff nurses, and school nurses. An asthma clinical nurse specialist teaches residents how to discharge children with asthma medications and how to create asthma action plans, meets monthly with staff nurses for asthma education, and serves as the hospital's nurse consultant for asthma. The hospital offers asthma training to schools and school nurses on request. Thus far in FY06, 40 trainings or presentations were made, reaching more than 750 participants.

In the **community**, Children's asthma programs cover a full continuum of care: prevention, evaluation, treatment, parental support, case management, training and education, and policy advocacy. This approach engages the entire community – families, schools, community health centers, advocacy groups, and community based organizations – and stresses treatment of the child in the context of his or her environment.

The Community Asthma Initiative (CAI) helps children and families improve how they manage asthma. By supporting families with case management, home visits, and asthma education, CAI aims to reduce the number of asthma-related emergency department visits and hospital admissions.

To improve access to asthma education, the hospital is a lead partner and funding source in a major asthma awareness campaign targeted to Boston neighborhoods with particularly high asthma rates. Children's joined with partners WGBH, the Boston Public Health Commission, the Boston Public Library, and the Boston Children's Museum to launch a campaign featuring the popular children's TV program "Arthur." The "Kids with Asthma Can...Asthma Management Campaign" emphasizes the three main quality-of-life indicators for children with asthma: playing, sleeping, and learning. The campaign includes several elements: a traveling "Buster" play with characters from the show, presented at 80 sites throughout the city; a series of Family Asthma Education Nights held at Boston Public Library branches; educational materials to help children learn about asthma; and a campaign with advertising on buses and the T and in transportation shelter/information areas in the targeted neighborhoods.

In FY06, Children's provided almost 16,000 asthma-related patient visits in the hospital and reached more than 3,400 children, youth, parents, and caregivers with asthma services and education in community settings.

For a more detailed description of the hospital's asthma initiatives, see Appendix F.

Mental Health

Children's Hospital Boston is one of the leading providers of mental health services to children in Boston, with more than 14,000 outpatient visits, 800 medical consultations, and 400 inpatient admissions for mental health care in 2006.

Research has shown that mental health programs with comprehensive, integrated, community-based approaches are most effective in preventing such mental health problems as conduct disorder, and alcohol and drug abuse. In addition, interventions involving family, school, and community are more likely to be successful than efforts aimed at a single domain. Further, efforts linking outreach and preventive programs run through schools and other community-based settings with clinical services at mental health clinics, community health centers, or school-based health clinic settings have been found to be effective.

All these approaches are evident in Children's comprehensive approach to mental health care, which includes not only direct patient care, but also research, training, community health, and public policy advocacy.

Much of the mental health care provided by the hospital is offered through three **direct-care** departments, all operating integrated and comprehensive services: Psychiatry, Social Work, and Developmental Medicine.

The Department of Psychiatry has a community of **researchers** whose work focuses on neurobehavioral development, mood disorders, attention/conduct disorders, and coping/medical illness. Mental health research is based on the premise that brain, behavior, and environment comprise a dynamic, integrated system in the developing child, and the key to progress is in-depth study, appreciating and then defining the complexity of the developing child.

The hospital provides mental health **training** to clinical providers as well as school and community health center staff on topics such as mental health issues in school, behavioral health issues, violence prevention, pediatric developmental screenings, advocating for patients, psychopharmacology, and how to advocate for public policy changes.

In the **community**, limited access to child mental health services is well-documented and represents a growing problem. Urban children and families in particular have problems with finding and accessing culturally and linguistically appropriate mental health services. These access barriers can be further complicated when care is not provided in a community setting. Children's has recognized this fact and has expanded its mental health services by providing psychiatrists in community health centers and other settings. The hospital also delivers care through prevention and wellness initiatives based in community health centers and schools, and through other community organizations. These initiatives comprise the *Children's Hospital*

Neighborhood Partnerships (CHNP). CHNP works to increase access to mental health services, improve the quality of services available, build capacity in partner organizations, and strengthen the ability of children to function successfully. Mental health initiatives in the community also provide screening, evaluation, education, support services, case management, treatment, and advocacy for children with mental health problems. By integrating and linking these efforts, and by deepening and intensifying the hospital's relationships with community partners, community capacity is strengthened to help Boston's children grow up strong and do well in their daily lives.

As discussed previously, the hospital also has funded expansion of mental health services in the community by placing psychiatrists in five community health centers. The hospital also has expanded access to services by developing and supporting school- and family-based support and specialized mental health care.

The CHNP initiative was recognized as a "notable program" in the Attorney General's 2006 Community Benefit Program Awards. Its treatment team also received a 2006 National Alliance for the Mentally Ill/Eli Lilly "Heroes in the Fight" award, given to individuals and groups who work tirelessly on behalf of those dealing with mental illness.

Because of the importance of mental health and the difficulty in accessing services, the hospital has developed the only mental health **advocacy** program of its kind in the U.S., the *Child and Adolescent Mental Health Advocacy Initiative (CAMHAI)*. Its goal is to bring about broad change in the mental health system and in mental health services through raising awareness of mental illness and highlighting barriers to care.

In the 2005-06 legislative session Children's actively targeted 10 bills, including supporting a bill to increase mental health benefits, mental health parity law reform, prevention strategies for shaken baby syndrome, and improved evaluations of children who have been sexually traumatized. Through CAMHAI, the hospital also worked toward successful opposition to a bill attempting to limit access to psychotropic drugs.

In addition to prevention and wellness, direct services are offered in four primary care settings in Boston through the *ASK (Advocating Success for Kids) Program*. ASK offers "one-stop-shopping" for access to services for children with medical, emotional, and behavioral issues or school-functioning problems and learning delays. Services include assessments and screenings to determine a child's school and emotional functioning, and development of recommendations for educational and social services. The ASK program also provides extensive follow-up with parents, teachers, and school staff.

In FY06, Children's provided more than 14,000 outpatient visits, 800 medical consultations, and 400 inpatient admissions for mental health care. In addition, Children's provided services to an estimated 3,700 children and youth, 1,900 teachers, school staff and community providers, and 650 parents in school and community settings.

For a more detailed description of the hospital's community-based mental health initiatives, see Appendix G.

Injury Prevention

Injuries – both unintentional and intentional – are the leading cause of death for children ages 1-19 in Massachusetts and result in 250,000 emergency room visits in a year. Unintentional injury is the leading cause of death for persons ages 1-34, and accounts for approximately 15 percent of medical spending from ages 1-19. Intentional injury or violence to children and young people – everything from physical and sexual abuse to suicide – is an increasingly serious problem, particularly in urban areas.

As part of its 2006 needs assessment effort, the hospital surveyed Boston families to help identify community concerns and gaps in current injury prevention programs. Based on their recommendations and data analysis, the most needed programs today are those that can respond to intentional injury – the result of the recent surge of violence in the city.

Children’s is addressing prevention of both unintentional and intentional injuries through a comprehensive effort that encompasses direct services, research, training, community health initiatives, education, and public policy advocacy.

Its **direct services** include a trauma department within the hospital’s Department of Surgery that ranks in the top 10 hospitals in the U.S. in terms of volume, a Division of Emergency Medicine that treats 11,000 injury patients each year, a Regional Poison Control Center and Division of Sports Medicine (see below), and other services that treat both unintentional and intentional injuries.

Research efforts include a “Safer Homes” study that is expected to provide new data on injury incidence; there is evidence that water-, bicycle-, and poisoning-related injuries seen in the hospital’s Emergency Department have decreased. Another study, a “Kids in the Back” observation program, is collecting data on children riding in the back seat of cars and those using booster seats, plus adults using safety belts, to provide data for developing an effective intervention.

Training efforts target staff at both Children’s and Martha Eliot Health Center. Staff have been trained in fitting bicycle helmets. A hospital-sponsored course on child and passenger safety is being prepared for staff. Nurses have been trained in testing car seats. And Safer Homes home visiting staff have been trained in the intervention.

Advocacy efforts focus on child passenger safety, bicycle and wheeled sports safety, poison control, and child protection, and include work toward enacting a primary seat belt enforcement law, prevention of shaken baby syndrome, and funding for staff training and response to severe physical and sexual traumas.

In the **community**, the hospital’s **unintentional injury** prevention program is carried out through its selection as a site for the *Injury Free Coalition for Kids (IFCK)*, a national childhood injury prevention program of the Robert Wood Johnson Foundation. The Boston program’s goal is to reduce injuries to children under the age of 15 in Jamaica Plain over a four-year period. IFCK has a safer homes program, focused on reducing the risk of injuries from fire, poisoning, and falls; car seat and sports helmet safety programs, both of which involve education and

distribution of car seats and sports helmets; and is actively involved in outreach by participating in community health fairs and events.

Children's also has a strong commitment to help prevent sports-related injuries in children. The hospital's Division of Sports Medicine provides comprehensive assessment, treatment, and follow-up care to children, adolescents, and young adults with sports-related orthopedic injuries. In addition to providing care at the hospital, the division also brings its resources to the community through the Boston Public Schools Sports Medicine Initiative. Staff and orthopedic residents coordinate and supervise medical coverage for BPS sporting events; in 2006, staff contributed more than 100 hours of time at BPS events. The division also has provided medical coverage for a variety of mass-participation sporting events such as the Boston Marathon, the Bay State Games, events at the Reggie Lewis Track and Athletic Center, and other summer sports camps and recreational programs.

Finally, as described above (see page 11), Children's Hospital is the site of the Regional Center for Poison Control and Prevention (covering Massachusetts and Rhode Island), which offers around-the-clock treatment and advice regarding poisonings.

A variety of hospital-based programs and community partnerships have been developed to reduce the prevalence of **intentional injuries**, including child abuse and youth violence.

Hospital programs include clinical assessment services for those who have been maltreated, a 24-hour consultation service, and an advocacy program for battered women and their children. The hospital also partners with government agencies and others to prevent and treat children who are at risk or have been neglected or abused. Children's has provided both clinical and financial support to the Suffolk County Children's Advocacy Center, which treats children who have been abused.

Children's provided more than \$1 million to support initiatives through the spring and summer of 2006 to promote peace and prevent violence. The funds supported more than 30 community organizations and city government agencies in developing and implementing initiatives designed to engage youth, provide opportunities for training, and offer role models in a positive work environment. These included: securing 156 paid summer job placements for youth (including 36 students hired at Children's) by providing funds to city and community programs; access to recreation and youth development opportunities such as camp scholarships for 80 Boston children from Martha Eliot Health Center and Children's Hospital Primary Care Center; funding renovations at the Melnea Cass Memorial Pool in Roxbury; supporting activities at the BELL Summer Program; funding for 10 community health centers to expand violence prevention or recreation programs; and a series of grants to 12 community organizations for innovative programs such as peace education at a child care center, expansion of recreational opportunities at local YMCA's, and peer leadership programs.

In FY06, Children's provided treatment to an estimated 11,000 children through Emergency Medicine, and hospital-based prevention and protection services reached more than 1,700 children. In addition, the hospital reached almost 3,000 children, youth, parents, and caregivers in community settings.

For a more detailed description of the hospital's injury prevention initiatives, see Appendix H.

Fitness and Nutrition

Obesity is a complicated medical, social, and lifestyle issue for children, especially children living in urban areas. Children who are struggling with being overweight or who are at risk need access to specialty medical services, nutrition education, and recreational opportunities, which may not always be available in health care settings. Thus, Children's Hospital Boston's approach to this issue is to support and work with community partners who are delivering nutrition education and physical activities.

The hospital's current focus is on working to identify best practices among obesity prevention programs – both hospital-based and in the community – to ensure that its programs are optimally effective in encouraging fitness and nutrition among children and adolescents.

Children's is internationally recognized for its treatment program to help overweight and obese children. The Optimal Weight for Life (OWL) program is the largest pediatric obesity clinic in New England, currently serving more than 700 children annually (one-fourth of whom are from the city of Boston). The OWL clinic is staffed by a multidisciplinary team that includes physicians, nurse practitioners, dietitians, psychologists, social workers, and exercise physiologists – all working to treat children and adolescents who are overweight or obese and those with Type II diabetes. The focus of the program is on healthful eating and a low glycemic index diet, but also includes individualized meal plans and exercise programs, plus behavior modification and group counseling.

This track record, coupled with a focus on local children at risk and strong community connections, makes Children's ideally suited to expand efforts to help prevent and treat these problems, which are reaching epidemic proportions; for example, a recent study showed that 14 percent of toddlers from low income families in Boston are overweight; and in the Boston Public Schools, 25 percent of children are at risk, and another 20 percent are overweight or obese.

The consequences of obesity and lack of fitness can have both short-and long term negative impacts – everything from early onset of cardiovascular disease to diabetes. To reverse this trend, Children's is finding solutions and ways to prevent the problems of obesity on all fronts – through **direct services** such as the OWL program described above and other programs described below, plus research, training, community health, and public policy advocacy.

Obesity-related **research** at Children's spans a range of issues, including nutrition and food consumption patterns, diabetes and health, school programs, eating disorders, and evaluation of community-based programs.

Clinicians are assisted in remaining current through **training** sessions, “shadowing” programs, and conferences.

Improving school nutrition and physical activity are two fitness-and-nutrition related **advocacy** activities. Two bills have been introduced in the state legislature to address these problems.

In the **community**, *One Step Ahead*, a community-focused treatment and prevention program, serves Boston children ages 3-13 by providing evaluations, counseling, and helps to identify and refer them to other nutritional, educational, and recreational resources. At the Martha Eliot Health Center, the *I'm iN Charge* program targets young people ages 9-20 who are overweight and at risk for Type II diabetes and provides them with education, clinical care, and access to other community resources.

In addition, the hospital has provided funding to eight hospital-affiliated community health centers with existing fitness and nutrition programs. This funding program, called "Fitness in the City," is aimed at building community capacity to help reduce childhood obesity; and to help identify the best practices to provide obesity prevention services in the community. In addition, the hospital's contribution to the United Way has enabled Children's to support "scholarships" for children to attend *Body by Brandy4Kids*, a Roxbury-based program designed to support physical fitness and healthy living for children at risk for health issues associated with obesity.

In FY06, Children's provided hospital-based obesity treatment to 600 children, and reached more than 500 children and youth in community settings.

For a more detailed description of the hospital's fitness and nutrition initiatives, see Appendix I.

Speaking Out Through Public Policy Advocacy

Influencing public policy to improve child health is an important aspect of Children's Hospital Boston's commitment to community health. As the leading provider of medical services to low-income children in Massachusetts, and a critical safety net for children throughout New England, Children's recognizes its special obligation to speak out about the crucial needs of children, adolescents, and young adults.

To accomplish this, Children's regards public policy advocacy as a critical component of its overall approach to community health and its focus on providing the full spectrum of care. The hospital has developed comprehensive child health policy advocacy initiatives in its four program areas: asthma, mental health, injury prevention, and fitness and nutrition. For example, the hospital provided leadership in successful efforts to enact legislation aimed at preventing shaken baby syndrome, and was a leader in the ultimately unsuccessful effort to enact a primary seat belt law. Current priorities include ensuring adequate insurance coverage for asthma education, improving school nutrition standards, requiring that physical education be taught in schools, and advocating for mental health parity.

A major focus for Children's advocacy efforts in FY07 will be on mental health. Children's joined with the Massachusetts Society for the Prevention of Cruelty to Children (MSPCC) to launch a long-term campaign to reform the state's mental health care system. Initial work on the campaign began in FY06 and included the development of the report "Children's Mental Health in the Commonwealth: The Time is Now." This report included recommendations for specific legislative change. Children's and MSPCC also began work with Health Care for All's grassroots group, Children's Health Access Coalition, to help draft the legislation and drive the campaign to advocate for change.

Children's also has been a longstanding leader in improving children's health insurance and has helped drive the effort to expand children's coverage. The hospital has provided critical resources and support to efforts to ensure that policy gains are translated into actual coverage, both by enrolling uninsured children on-site and through community partnerships. For example, as an active participant and funding source for the statewide Children's Health Access Coalition, the hospital has worked to expand insurance coverage for children in Massachusetts and assure affordability of care.

The hospital worked as part of the Affordable Care Today (ACT) Coalition to enact the new Massachusetts health reform law, which includes a number of provisions to expand coverage, notably the expansion of MassHealth coverage to children in families whose income is up to 300 percent of the poverty level.

Children's partnered with Community Catalyst to expand these advocacy efforts regionally through the New England Campaign for Children's Health. This is a coalition of key stakeholders in child health from across New England that seeks to advance health care coverage for children at the state and federal level, as well as to enhance the quality of pediatric care.

Children's is dedicated to effecting real change in the lives of children through policy advocacy. To do so, however, it needs the support of Children's staff, medical and public health experts, families, patients, community partners, and others who can be a voice for children. Children's leverages these important voices in its advocacy efforts through the 1,300 member Children's Advocacy Network (CAN). In 2006, Children's developed a program to give 35 CAN advocates a chance to deepen their commitment to advocacy by participating in a special training series to become more effective advocates. The training provided them with the knowledge and skills needed to participate more fully in the policy-making process. Other hospital initiatives included engaging 15 medical residents in legislative advocacy through meetings with their legislators or staff to discuss issues ranging from school wellness to breastfeeding, from access to asthma education to access to care; and supporting the participation of seven families in Family Advocacy Day in Washington, DC, where they met with their members of Congress to advocate for continued and expanded Medicaid coverage and funding to train pediatric specialists.

For more information on the hospital's child advocacy initiatives, please see Appendix J.

Supporting Essential Community Partners

Partnerships are a key element in attaining Children’s Hospital Boston’s vision of “Healthy Children. Healthy Communities.” A task beyond the reach of any one organization – despite its level of commitment – achieving this goal requires a concerted and sophisticated effort to integrate and coordinate care. It truly “takes a village to raise a *healthy* child.”

In addition to its own efforts toward the goal, Children’s actively helps build and support the efforts of the “village” that is steward of the health of Boston’s children, on three levels:

- by partnering with community health centers, the Boston Public Schools, government agencies, and community-based organizations to address the core commitment areas of asthma, mental health, injury prevention, and fitness and nutrition as well as partnering with community programs aimed at improving child health more broadly
- by helping to support the infrastructure for the delivery of health and social services to children and families throughout Boston
- by acknowledging and acting on the hospital’s civic role and responsibilities, including support of local organizations that help make Boston a vibrant place to live and work.

In these relationships, the hospital seeks to leverage its unique vantage point as the Commonwealth’s only solely pediatric hospital to “advocate” for the health and well-being of children, and brings a purposeful, child-focused, culturally appropriate, family-centered point of view to its support of the efforts of community health partners.

At the same time, the hospital’s community health experience is enriched and deepened through its work with community partners – the hospital is an eager learner as well a generous contributor of its expertise. Hospital staff who serve in community projects are reciprocal learners, who gain insight as well as experience in working in and with the community.

Partnerships Aimed at Improving Child Health.

As discussed in the earlier section on the hospital’s community health initiatives, the success of the programs is due equally to the work of the hospital’s staff and its community partners.

The hospital’s community partnerships, however, extend far beyond the work of the hospital’s community health initiatives. Many affect child health more broadly. The hospital’s collaborations with community health centers, schools, and the Boston Public Health Commission form the cornerstone of these partnerships.

The hospital maintains strong relationships with community health centers, including its flagship center, Martha Eliot Health Center, and 11 others. The hospital works with these centers on a variety of treatment, prevention, and health and wellness programs, including those in the hospital’s core commitment areas: the majority of the centers have fitness and nutrition programs; many have school functioning/school preparedness, mental health, and asthma initiatives.

The hospital works extensively with the Boston Public Schools. Support is provided primarily to improve access to mental health care, including programs such as the Children’s Hospital Neighborhood Partnership (CHNP) and the Advocating Success for Kids (ASK) program. The hospital also offers asthma education workshops for students and their parents, and provides emergency asthma medication and equipment.

Supporting the Infrastructure for Health and Social Services.

While everyone in the “village” is equally committed to the stewardship of the health of Boston’s children and an equally important part of the city’s infrastructure to support children and families, not all have equal resources. Children’s Hospital believes it has a responsibility to help support these partners, both programmatically and financially.

In addition to providing services in individual schools, the hospital also supports the Boston Public Schools’ (BPS) health infrastructure in a variety of ways. The hospital offers scholarships to school nurses so that they may access professional development opportunities.

In 2006, Children’s built on the foundation of its long-standing collaboration with the BPS and the City of Boston on the “Countdown to Kindergarten” initiative by making a significant financial contribution to the city’s broader efforts to reach children aged birth-to-five and their families. The hospital increased its annual support of Countdown, provided a paid part-time staff person to the city for six months to conduct research on this subject, and funded two years of a new, free playgroup for Boston parents and their young children at the West Zone Early Learning Center.

Providing both clinical and financial support, the hospital also has a long-term partnership with the Suffolk County Children’s Advocacy Center (CAC). The CAC offers abused children access to medical professionals, police officers, the state Department of Social Services, social workers, mental health professionals, prosecutors, victim witness advocates, and domestic violence professionals. This multidisciplinary team works to create comprehensive safety and treatment plans for the children. The hospital provides the time of medical professionals (physician, social worker, and psychologist) one day a week to conduct interviews, develop assessments, and compose safety plans.

Other partnerships between the hospital and city government include co-sponsorship of the annual Mayor’s Award for Excellence in Health, which is given each year to a Boston-based program that effectively promotes the development of healthy children; the hospital provides a financial award for the winner, and actively serves on the steering and selection committees. Also in 2006, Children’s Center for Young Women’s Health (CYWH) joined with the City of Boston to sponsor a citywide Girls Summit on the unique needs of young women. Youth Advisors from the CYWH provide ongoing peer education and advocacy about vital adolescent health issues. Children’s also joined with the YWCA, the United Way, and the Boston Public Health Commission as lead sponsors of the “Girls: Get Real, Get Right, Get Informed!” Health and Wellness Summit, which attracted more than 100 young women and health professionals as attendees. Teens from CYWH led one of the summit’s workshops focused on internet safety.

In addition to partnerships with city government, community health centers, and schools, Children's provides financial and in-kind contributions to more than 75 local organizations to build community capacity toward improved child health. The hospital is able to seed innovative, community-based programs through its Community Child Health Fund (CCHF) and through providing essential funds to the local Community Health Network Area (CHNA). Through these two initiatives, the hospital supports community-based organizations and schools in a wide variety of projects ranging from anti-violence to nutrition, from physical activity and exercise to asthma and substance abuse. CCHF provides a total of \$50,000 annually for projects based at the hospital, in community health centers, schools, or in community-based organizations. CCHF has distributed 66 grants since 2000, for a total of approximately \$370,000. In 2006, through various sponsorship and membership opportunities, Children's also provided more than \$210,000 to community-based organizations that help support the infrastructure for health in Boston. In 2006, Dr. James Mandell, Children's President and CEO, was named the Chair of the Joseph Smith Community Health Center Annual Gala and the Action for Boston Community Development Gala.

Civic Responsibilities.

Every institution, whether large or small, private or not-for-profit, has a responsibility to be involved in its community. As one of the state's largest not-for-profit employers, Children's Hospital is dedicated to being a "good neighbor" to the local, surrounding communities, as well as working to ensure that Boston on the whole remains strong.

As the only freestanding pediatric hospital in the state, Children's has focused its civic responsibilities on those that serve children and families. For example, the hospital consistently has directed its support of the Fenway Community Development Corporation to those efforts that improve the lives of the neighborhood's families through programming. In addition to the hospital's active participation in the Training Institute, of which the Fenway CDC is a core partner, Children's has also provided financial support annually since 1996 to support the CDC's child and family focused activities.

Other examples of the hospital supporting worthy organizations serving children and youth can be found in another neighboring community, Mission Hill. Since 1998, Children's annually has funded the Mission Hill Little League, and last year a team was named the Children's Hospital Boston Red Sox; this program has provided recreation and fitness to the neighborhood's children and youth for more than 35 years. In 2006, the hospital also supported the Mission Hill Youth Collaborative (through the Walk for Health), and Puddingstone Park (through the Mission Hill Road Race). The hospital also sponsored the second annual "Countdown to Kindergarten" parade with Mission Hill Main Streets. Financial contributions such as these enable Children's to target local community support to activities that directly improve the health and quality of life of residents.

The hospital also is active in a number of organizations that improve the City of Boston more broadly and bring a purposeful, child-focused, culturally sensitive, and family-centered point of view to these groups. For example, Children's has provided significant support to ABCD for several years to sustain its mission of improving the lives of vulnerable families in Boston. The hospital also is a proud sponsor of Mass Inc., encouraging thoughtful dialogue and research

related to civic life. In addition, the hospital's CEO is a member of the Board of the Greater Boston Chamber of Commerce, and the hospital participates in many of the Chamber's events and forums each year. In addition, the hospital's COO is a member of the board of the Massachusetts Taxpayers Foundation, the Medical Area Service Corporation, and A Better City (formerly known as the Artery Business Committee). Other senior staff members represent the hospital on the state's Catastrophic Health Care Committee and the Boston Plan for Excellence, including participating annually in its "Principal for a Day" program.

Children's is working to help make Boston vibrant, as well as responsive to the needs of children and families. As discussed earlier, the hospital achieves this by supporting the infrastructure for the delivery of health and social services throughout Boston. At the same time, the hospital seeks to assure that low- and middle-income families can remain part of the city – that they have stable employment, career development opportunities, and affordable housing in livable, family-friendly neighborhoods.

For more detailed information of the hospital's support for essential community partners, see Appendix K as well as Appendices E and L for descriptions of the hospital's support for and partnerships with community health centers and Boston Public Schools, respectively.

Organizing for Community Health

The previous pages, plus the appendices to follow, describe Children's community benefits programs in detail. This section outlines the framework and underpinnings for the hospital's community health programming, in keeping with the format suggested by the Attorney General's Office for reporting these activities.

Mission Statement

As a major pediatric referral center, Children's Hospital Boston's mission is to provide the highest quality health care. ***It is also the hospital's mission to enhance the health and well-being of the children and families in our local community.*** In support of this mission, Children's strives to be the leading source of research and discovery, seeking new approaches to the prevention, diagnosis, and treatment of childhood diseases, as well as to educate the next generation of leaders in child health.

Definition of Community Health

Children's Hospital Boston uses its medical expertise to help ensure that children can access services, preventable harm is eliminated, families and communities are better able to care for their children, and public policy benefits children.

Governing Body

The Board of Trustees is the governing body for Children's Hospital, providing oversight and guidance to the hospital leadership team and supporting the implementation of each of the hospital's mission areas, including community health. The Board is ultimately responsible for the successful operation and financial viability of the hospital and has final authority over the operations of the hospital.

Governing and Management Structure

The community benefits activities of Children's Hospital Boston have a governance and management structure that includes the hospital's Board of Trustees, the Board Committee for Community Health (a subcommittee of the hospital board), the Community Advisory Board, and the Office of Child Advocacy (OCA).

The Board of Trustees is the governing body for Children's Hospital and is ultimately responsible for the successful operational and financial viability of the hospital.

In 2006, the Board of Trustees established a subcommittee on community health. The charge of the *Board Committee for Community Health* is to:

- review and recommend to the Board a community service strategy
- serve as a resources and source of expertise to hospital staff
- monitor outcomes for community service programs
- serve as ambassadors for the hospital in the community.

In addition to hospital trustees, the Board Committee membership includes representatives from the community.

The *Community Advisory Board* advises OCA regarding program design and implementation. Representing a wide range of cultures, neighborhoods, and constituencies, Advisory Board members are knowledgeable about the challenges facing Boston children and families, as well as about health and social service programming and organizations in the city that are important partners for the hospital.

Under the direction of the Vice President for Child Advocacy, the *Office of Child Advocacy* is charged with developing and implementing the strategy to pursue the hospital's community health mission. In this role, OCA serves a variety of core functions: identifying program focus areas; providing technical assistance to hospital staff who run the institution's community health programs (including fundraising, program planning, program management, and evaluation); initiating public policy efforts; and facilitating partnerships with other organizations. The Vice President reports directly to Children's Chief Executive Officer and Chief Operating Officer and is a member of the senior management team.

One of the key functions of the OCA is accountability. As one of the hospital's core mission areas and one of its eight strategic goals, community health programming is subject to evaluation against benchmarks for safety, effectiveness, timeliness, patient centeredness, efficiency, and equitability. This "quality dashboard" is based on a national model. Children's is among the first hospitals in the nation to include community health among its strategic goals and to measure results using the same rigors and benchmarks against which patient care quality is measured.

In addition to the quality dashboard, each community health program is evaluated for quality and effectiveness, both in terms of process and outcome measures. Ultimately, evaluation and measurement techniques will be applied to all community health initiatives – everything from asthma initiatives to advocacy – to ensure that the hospital's efforts are having the intended, broad impact on overall child health.

Communication of Community Benefits with Staff

Children's Hospital communicates its community health mission and programs in publications that are distributed to internal and external audiences. In 2006, the hospital published a 20-page summary booklet on its community health vision and programs. More than 10,000 copies were printed, in English, Spanish, and Haitian Creole, and were sent to all employees, business and opinion leaders, and state and local government leaders, as well as community residents. The full booklet can be viewed at www.childrenshospital.org/communitybrochure.

Articles featuring community health initiatives are highlighted in Children's publications including:

- *Faculty News*, a monthly newsletter distributed to medical faculty and employees
- *Children's News*, a monthly newsletter distributed to employees, medical staff, and patient families
- *Dream*, a quarterly magazine distributed to wide audience of employees, patients, and civic and community leaders.

Recent articles in these publications have profiled Children's community-based asthma programs, mental health initiatives, and injury prevention efforts, as well as programs made

possible with Children's clinical expertise and financial support.

The Office of Child Advocacy publishes its own newsletter three times a year, the *kidvocate*[®], which is distributed to more than 3,000 readers including hospital staff and faculty and staff from community health centers, community-based organizations, and schools. The *kidvocate*[®] provides updates about the hospital's public policy advocacy efforts and partnerships with community-based organizations, schools, and health centers, as well as profiles of community and civic leaders who are improving the health of Boston children.

This annual report to the Attorney General is available for staff and faculty to review on the hospital's internal website; hard copies of the report also are available.

In addition to written materials, members of the OCA staff make frequent presentations to the hospital Board, Board committees, key department leaders within the hospital, and others. OCA holds team meetings with community health program staff to share information and assist in the development of strategies to improve. These efforts were expanded in FY06 through formal, semi-annual community health staff working meetings in which staff reported on their programs to increase awareness of and support for programs among other staff members, and bimonthly "Community Health Grand Rounds," featuring outside speakers or in-house experts, which helped enhance the team's professional development opportunities. In addition, community health program descriptions and updates were presented as part of the agenda for two hospital-wide "town meeting" sessions in 2006.

Needs Assessment

To inform the hospital's community health programming priorities, the hospital uses both formal and informal tools.

Annually, the hospital reviews public health data to track the prevalence, incidence, and changes in health status of children and families locally and statewide. Because of the depth and breadth of its community ties, the hospital is able to take a regular reading of community health needs through its programmatic partners and through its Community Advisory Board. Within the hospital community health team, program directors interact daily with patients and families who often are an excellent barometer for local health needs. All these activities regularly reinforce the more evidence-based information obtained through a bi-annual, formal, in-depth community needs assessment conducted through the Office of Child Advocacy.

The most recent of these formal assessments was undertaken in 2006.

The goals of the 2006 needs assessment were twofold. The first was to collect information from the community that would help the hospital confirm its understanding of Boston's community health needs and priorities while at the same time identifying specific strategies to inform the evolution of its five-year strategic plan. A second goal was to compile information through literature reviews covering each of the core commitment areas (asthma, mental health, injury prevention, and fitness and nutrition) that would help the hospital identify "best practices" that could be used to improve the effectiveness of community health initiatives.

The needs assessment included an exhaustive review of the medical literature and public health data, four focus groups, plus interviews with nearly 50 community stakeholders. These included business and community leaders, health providers, nurses, social workers, school counselors and administrators, representatives from advocacy organizations and community-based organizations as well as local residents, including men, women, parents, and youth.

Based on the information gathered through these means, the hospital reaffirmed its basic strategy of focusing on the four “core commitment” areas of community health: asthma, mental health, injury prevention, and fitness and nutrition. While acknowledging the importance of other health issues, Children’s chose to focus on those health areas where it has available clinical expertise and the resources to make a significant impact. In the 2006 needs assessment, mental health and intentional injury prevention were top-of-mind issues for most respondents. Many of the stressors of inner-city life – everything from depression to post-traumatic stress syndrome – have mental health roots. And the recent spike in violence in the city has had a major impact on the quality of life of community residents.

Community Participation

The Office of Child Advocacy gains feedback from the community in several ways. Programmatically, the hospital’s partners – from community health centers to government agencies, from schools to community-based organizations – play a large role in the development and execution of community health programming.

In addition, through its Community Advisory Board (CAB), which meets quarterly, the hospital has a direct link to community expertise. CAB members are involved in identifying program priorities, brainstorming program interventions, building community partnerships, and reviewing the hospital’s program plans for community health. The CAB also provides guidance to help implement programming and identify new community partners. OCA staff members regularly meet with staff from community health centers and community organizations to strengthen existing relationships and to help identify new partnerships. OCA staff members use the feedback and insight of these partners to shape the hospital’s community efforts.

To ensure a diverse membership for the Community Advisory Board, Children’s has board members from community health centers, community organizations, schools, and local government agencies, along with parents. All these participants bring expertise and reflect the culturally diverse community served by the hospital’s programming.

For a complete list of the members of the Community Advisory Board, please see Appendix M.

As mentioned above, partnerships are a key element in attaining community health planning. Children’s Hospital actively helps build and support health improvement efforts throughout Boston on three levels:

- partnering with community health centers, the Boston Public Schools, government agencies, and community-based organizations to address the core commitment areas of asthma, mental health, injury prevention, and fitness and nutrition as well as partnering with community programs aimed at improving child health more broadly
- helping to shore up and support the infrastructure for the delivery of health and social services to children and families throughout Boston

- acknowledging and acting on the hospital's civic role and responsibilities, including support of local organizations that help make Boston a vibrant place to live and work.

Through these efforts, the hospital both recognizes and supports the larger system of care that exists in Boston.

For more detailed information about the hospital's support for and partnerships with community organizations, see pages 23 ff as well as Appendices E, K, and L describing the hospital's partnerships with community health centers, essential community partners, and the Boston Public Schools, respectively.

Community Benefits Planning: Priorities and Target Populations

The hospital's Office of Child Advocacy is charged with coordinating, implementing, and reporting on the hospital's community health initiatives. In close collaboration with various hospital departments, OCA develops a community benefits plan based on the leading health needs of children, expertise from the hospital's clinical staff, as well as guidance from the hospital's Community Advisory Board and civic and community leaders.

OCA convenes providers and staff working on community health initiatives with the goal of bringing together the hospital's collective clinical expertise. These planning teams meet on an ongoing basis to review data on community health needs, assess community initiatives, and oversee the development and implementation of the hospital's community initiatives. The planning teams, in partnership with the community, develop comprehensive program plans to address a particular health need. These program plans are presented to the Board Committee for Community Health, the Community Advisory Board, and key community organizations and health centers for review and further feedback.

To benchmark and further inform efforts to evaluate its community health programming, Children's Hospital commissioned an audit of community benefits activities in 2006. Under the auspices of Community Catalyst, a Boston-based advocacy organization, the audit was conducted by the Public Health Institute, a well-respected independent organization that promotes health, well-being, and quality of life through research and evaluation, training and technical assistance, and by building community partnerships. The hospital will receive audit results during 2007, which will help shape the future direction of its community health efforts.

Community benefits planning will be further aided by results of the comprehensive community needs assessment conducted in 2006.

The hospital has focused its efforts on Boston neighborhoods where it has affiliations with health centers and established partnerships with community organizations. In addition, as part of the previously mentioned community needs assessment process, a review of public health data identified specific neighborhoods with the highest rates of asthma, injuries, mental health concerns, and obesity, as well as areas where families face barriers to accessing primary, specialty, and mental health care.

As a result, many of the hospital's community health efforts are targeted to children and families living in the Boston neighborhoods of Jamaica Plain and Roxbury. Once the efficacy of these interventions has been proven, the various programs can be replicated in other Boston neighborhoods and beyond. As described in the section "A Core Commitment to Community Health," the hospital has identified asthma, mental health, injury prevention, and fitness and nutrition as key child health priorities for these neighborhoods. Through its partnerships with other health providers, city government entities, and organizations that care for children and families, the hospital reaches hundreds of other children across the city.

ATTACHMENT 2

ANNUAL REPORT STANDARDIZED SUMMARY

Children's Hospital Boston

Boston, Massachusetts

www.childrenshospital.org

Region Served: Children's Hospital Boston serves children globally and throughout the United States, New England, and Massachusetts. The hospital's community health efforts focus on improving the health and well-being of children and families in Boston.

Report for Fiscal Year 2006

Community Benefits Mission

Children's Hospital Boston uses its medical expertise to help ensure that children can access services, preventable harm is eliminated, families and communities are better able to care for their children, and public policy benefits children.

Program Organization and Management

Children's management includes the Board of Trustees, Board Committee for Community Health (a subcommittee of the hospital board), Community Advisory Board, (CAB) and Office of Child Advocacy (OCA). The Board of Trustees ultimately is responsible for the successful operational and financial viability of the hospital. The Board Committee for Community Health makes recommendations to the Board and monitors outcomes of community programs. The CAB advises OCA around program design and implementation. OCA is charged with developing and implementing the hospital's community health mission strategy.

Key Collaborations and Partnerships

ABCD Head Start
BMC – Combined Residency Program
BMC-Family Advocacy Program
BMC-Child Witness to Violence Program Center
Boston Community Centers
Boston Fire Department
Boston Public Health Commission
Boston Public Schools
Boston STEPS Coalition
Boston Urban Asthma Coalition
Boston Centers for Youth and Families
Boston YMCA
Bowdoin Street Community Health Center
Boys and Girls Clubs
Bromley-Health Tenant Management Corp.
Brookside Community Health Center
Buckle Up Boston
Child and Adolescent Mental Health Coalition
Children's Health Access Coalition
Children's Services of Roxbury
Children's Trust Fund
Codman Square Health Center

Community Care Alliance
Crittenton Hastings House
Department of Social Services
Dimock Community Health Center
Dimock Head Start
Dorchester House Community Health Center
East Boston Health Center
Fenway Community Development Corporation
Greater Boston YMCA
Health Care for All
Health Law Advocates
Injury Free Coalition for Kids®
Jamaica Plain Asthma Environmental Initiative
Jamaica Plain Coalition: Tree of Life
Joseph M. Smith Community Health Center
Martha Eliot Health Center
Massachusetts Advocacy Center
Massachusetts Department of Health
Massachusetts Hospital Association
Massachusetts Public Health Association
Mayor's Award for Excellence
Mental Health: Legal Advisors Committee
Office of Community Partnerships

Parent Professional Advocacy League (PAL)
Refugee and Immigrant Assistance Center
Roxbury Branch - YMCA
Roxbury Community Alliance for Health
Roxbury Comprehensive Community Health
SafeKids Coalition
Sidney Borum Jr. Health Center

South Cove Community Health Center
South End Community Health Center
Southern Jamaica Plain Community Health
Upham's Corner Health Center
WGBH Public Television and Radio
Whittier Street Community Health Center

Community Health Needs Assessment

Annually, Children's reviews public health data to track prevalence, incidence, and changes in health status of children locally and statewide. The hospital takes a regular reading of community health needs through its programmatic partners and through its Community Advisory Board. Within the hospital community health team, program staff interacts with children and families to understand health needs. All these activities regularly reinforce the more evidence-based information obtained through a bi-annual, formal, in-depth community needs assessment.

Community Benefits Plan

To help children lead healthy, safe, and active lives, Children's addresses the issues of asthma, obesity, injury prevention, and mental health through coordinated initiatives. By partnering with the community to merge a medical model with a public health model of care, the hospital is able to provide and support a range of services. The hospital has focused on Boston where it has affiliations with health centers and community partnerships. This model aims to achieve long-term outcomes: coordination within the systems of care, the ability to treat "the whole child," and the ability to track and measure improvements in child health.

Key Accomplishments of Reporting Year

- The Community Asthma Initiative identified 197 children to participate in case management and 104 were enrolled; 66 families received home visits.
- Children's Hospital Neighborhood Partnerships provided 3,447 children with mental health services; 1,135 received direct treatment and 2,312 participated in prevention activities.
- Injury Prevention distributed 1,200 helmets and 109 car seats. Staff participated in 26 community events to reach an estimated 1,085 parents and 1,740 children.
- Fitness in the City supported 118 children through case management programs at 8 community health centers. 52 children attended Body by Brandy's gym and 243 received assistance to access physical activities.

Plans for Next Reporting Year

- Provide a comprehensive asthma program that improves access to asthma services for children, promotes healthy home environments, and improves asthma knowledge and management among children and families.
- Increase access to mental health care and services for unserved and underserved children and families.
- Work on the coordination of all injury prevention programs to share services, lessons learned, and evaluation plans.
- Continue to identify best practices in fitness and nutrition and provide multidisciplinary medical, nutritional, and physical education to youth.

Contact

Jennifer Miller Fine
Communications Manager
Office of Child Advocacy
21 Autumn Street, 3rd Floor
Boston, MA 02115
617-355-8600

Selected Community Benefits Programs

| PROGRAM OR INITIATIVE | TARGET POPULATION/OBJECTIVE | PARTNER(S) | HOSPITAL/HMO CONTACT |
|--|---|--|--|
| <p>Asthma Program</p> | <p>Children 0-18 years living in the neighborhoods of Jamaica Plain, Roxbury, Dorchester, Boston, South End, Fenway, & Allston/Brighton.</p> <p>To improve the self-management of asthma by children and their families.</p> | <ul style="list-style-type: none"> -Boston Urban Asthma Coalition -Boston Public Health Commission/Boston STEPS Coalition -Various Community Health Centers -Greater Boston YMCA -Boston Public Schools -Boston Community Centers -Project Health -Roxbury Branch YMCA | <p>Elizabeth R. Woods, MD, MPH Children’s Hospital Boston 300 Longwood Avenue Boston, MA 02115 617-355-6495 Elizabeth.woods@childrens.harvard.edu</p> <p>Amy Burack, RN Children’s Hospital Boston 300 Longwood Ave Boston, MA 02115 617-355-6090 amy.burack@childrens.harvard.edu</p> |
| <p>Advocating Success for Kids (ASK)</p> | <p>Children 0-12 years living in the neighborhoods of Roxbury, Dorchester, Fenway, & Allston/Brighton.</p> <p>To provide hospital-based multi disciplinary specialty screening services to children with educational and/or behavioral problems at the community level</p> | <ul style="list-style-type: none"> -Children’s Hospital Developmental Medicine Center -Children’s Hospital Primary Care Center -Community Care Alliance and 3 of its health centers -Boston Public Schools -Various Community Health Centers | <p>Katherine Engel, MSW, MPH Children’s Hospital Boston 300 Longwood Ave Boston, MA 02115 617-355-4666 katherine.engel@childrens.harvard.edu</p> |
| <p>Children’s Hospital Neighborhood Partnerships (CHNP) and Jamaica Plain Children’s Mental Health Network (JP Network)</p> | <p>Children 0-18 years living in the neighborhoods of Jamaica Plain, Roxbury, Dorchester, Boston, Fenway, West Roxbury, Roslindale, & South Boston</p> <p>To promote children’s social, emotional, and behavioral health and establish long-standing resources for children, families, and their communities.</p> | <ul style="list-style-type: none"> -Children’s Hospital Department of Psychiatry -Boston Arts Academy -Boston Latin School -Charles Sumner Elementary School -English High School -Lee Academy Pilot School -John Marshall Elementary School -Parent professional Advocacy League (PAL) -Manville School -Maurice J. Tobin School -Patrick Lyndon Pilot School -Richard Murphy Elementary School -South Boston High School -St. Patrick School -Young Achievers Science and Math Pilot School -Martha Eliot Health Center -Judge Baker Children’s Center -South Cove Community Health Center -Vinfen -Project ASPIRE -Dimock Community Health Center -Boston ABCD -Boston Public Schools -Harvard Graduate School of Education -Boys’ and Girls’ Clubs of Boston -The Boston Ballet School | <p>Caroline Watts, Ed.D. Children’s Hospital Boston 300 Longwood Ave Boston, MA 02115 617-355-7450 caroline.watts@childrens.harvard.edu</p> |
| | | <p>Elementary Schools</p> <ul style="list-style-type: none"> -Kennedy School -Manning School -Mendell School <p>Community Health Centers</p> <ul style="list-style-type: none"> -Brookside Community Health Center -Southern Jamaica Plain -Martha Eliot Health Center | |

| | | | |
|---|---|--|--|
| <p>Child and Adolescent Mental Health Advocacy Initiative (CAMHAI)</p> | <p>Children 0-18 years living in the neighborhoods of Jamaica Plain, Roxbury, & Boston.</p> <p>To improve access to prevention and treatment services for children with mental health care needs.</p> | <ul style="list-style-type: none"> - Boston Public Health Commission - EOHHS - Boston Public Schools - Children's Hospital Boston Department of Psychiatry - Mental Health Commission for Children - Department of Public Health | <p>Karen Darcy Children's Hospital Boston 300 Longwood Ave Boston, MA 02115 617-355-6090 Karen.darcy@childrens.harvard.edu</p> |
| <p>Injury Prevention Program</p> | <p>Children 0-18 years in the neighborhood of Jamaica Plain, MA.</p> <p>The Injury Prevention Program distributes car seats and bicycle helmets to families in need and carries out groundbreaking work in bringing the injury prevention message directly into homes in low-income communities in the Boston area.</p> <p>The goal of IFCK Boston is to reduce the incidence of injuries to children under the age of 15 in Jamaica Plain. To achieve this goal, IFCK increases the injury prevention knowledge base of families in Jamaica Plain through home visits and assessments, injury prevention education, and the distribution and installation of safety products. IFCK also increases opportunities for families to participate in community-based safety education events and programs. Programs were developed based on the results of a comprehensive needs assessment.</p> | <ul style="list-style-type: none"> -Children's Hospital's Trauma Program -Children's Hospital Central Nervous System Injury Center -BuckleUpBoston! -Boston SafeKids Coalition -Boston Public Health Commission -Massachusetts Department of Public Health -Community Health Centers <ul style="list-style-type: none"> - Martha Eliot Health Center - Southern Jamaica Plain Health Center - Brookside Community Health Center -Jamaica Plain ABCD Head Start -City Life Urbana -Committee for Boston Public Housing - Jamaica Plain Coalition, Tree of Life - The Hyde Square Task Force - Boston Public Schools - Boston Housing Authority - Bikes Not Bombs - Associated Early Care & Education - MSPCC -Boston Building Materials Co-op | <p>Taranjeev Walia Children's Hospital Boston 300 Longwood Ave., MS-611 Boston, MA 02115 617-355-2792 tarnjeev.walia@childrens.harvard.edu</p> |
| <p>One Step Ahead (OSA)</p> | <p>Children 3-13 years in Boston and surrounding communities.</p> <p>The program offers individualized, culturally appropriate nutrition and physical activity education aimed at breaking down barriers to behavior change, encouraging improved diet quality and physical activity patterns, and reducing chronic disease risk among racial and ethnic minorities.</p> | | <p>Elsie Taveras. MD Children's Hospital Primary Care Center 300 Longwood Avenue Boston, MA 02115 elsie.taveras@childrens.harvard.edu 617-509-9928</p> |
| <p>I'm in Charge (InC)</p> | <p>Children 6-18+ years in the neighborhoods of Jamaica Plain, Roxbury, & Dorchester.</p> <p>To reduce the number of children in Jamaica Plain, Roxbury, and Boston who are overweight or obese.</p> | <ul style="list-style-type: none"> - pilot program at Martha Eliot Health Center -YMCA | <p>Barbara Wojtkiewicz. Martha Eliot Health Center 75 Bickford Street Jamaica Plain, 02130 617-971-2406 Barbara .Wojtkiewicz@childrens.harvard.edu</p> |

Community Benefit Expenditures

| TYPE | ESTIMATED TOTAL EXPENDITURES FOR FY06 | APPROVED PROGRAM BUDGET FOR NEXT FISCAL YEAR * |
|--|--|---|
| COMMUNITY BENEFITS PROGRAMS | (1) Direct Expenses \$24,258,381 | \$ ***See note below *Excluding expenditures that cannot be projected at the time of the report. |
| | (2) Associated Expenses N/A | |
| | (3) Determination of Need Expenditures \$181,598 | |
| | (4) Employee Volunteerism N/A | |
| | (5) Other Leveraged Resources \$2,118,199 | |
| COMMUNITY SERVICE PROGRAMS | (1) Direct Expenses \$2,135,218 | |
| | (2) Associated Expenses N/A | |
| | (3) Determination of Need Expenditures \$75,000 | |
| | (4) Employee Volunteerism N/A | |
| | (5) Other Leveraged Resources \$1,112,101 | |
| NET CHARITY CARE or UNCOMPENSATED CARE POOL CONTRIBUTION | \$5,635,983 * | |
| CORPORATE SPONSORSHIPS | \$146,615 | |
| | TOTAL | \$35,663,095 |

| |
|--|
| TOTAL PATIENT CARE-RELATED EXPENSES FOR FY 06 \$649,196,066 |
|--|

**Based on preliminary calculations as provided in the Uncompensated Care Pool FY 06 Interim report as prepared by the Massachusetts Division of Health Care Finance and Policy*

***Children's Hospital Boston plans to either maintain or expand all of the initiatives outlined in this report in FY07.

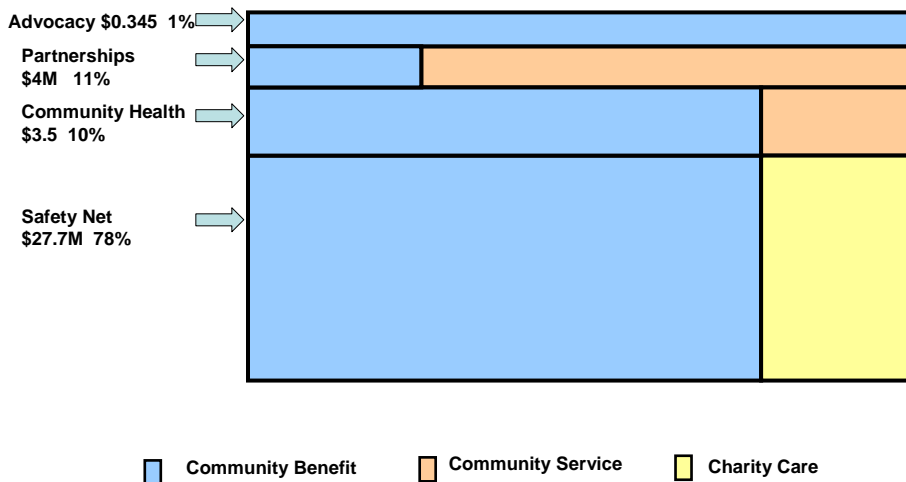
Children’s Hospital’s community benefits spending, as reported in above Expenditures table of this report, can also be depicted as follows:

**Community Benefits Expenditures FY06
Attorney General Categories – \$35M**

| |
|----------------------------|
| Community Service \$3.3M |
| Community Benefits \$26.5M |
| Charity Care \$5.6M |

This same spending, allocated according to Children’s four internal categories (safety net, community health, partnerships, and advocacy), would appear as follows:

**Community Benefits Expenditures FY06
AG and CHB Categories – \$35M**



About the Appendices

The 14 appendices that follow contain a wealth of detailed information on the comprehensive approach to community benefits taken by Children's Hospital Boston. This information illustrates the intersection among clinical programs, community care, safety net, community health, partnerships, and advocacy efforts that overlays the hospital's efforts to improve the health and well-being of children and families in Boston. Although the appendices are arranged programmatically, many of the programs are highly integrated and reflect the hospital's planned, managed, measured, and organized efforts to fulfill the hospital's community benefit mission. With integration comes repetition, so some programs are mentioned in more than one appendix.

Appendix A Martha Eliot Health Center Profile

Center Background

The Martha Eliot Health Center (MEHC) was founded in 1966 as a community-based initiative to provide maternal and child health care services including baby care, immunizations, and preventive services for residents of the Bromley Heath Housing Development. With federal funding, the clinic expanded in 1967 into a neighborhood health center, which became a collaborative project of Children's Hospital Boston, the Boston Hospital for Women, and Peter Bent Brigham Hospital. In 1973, Children's assumed full responsibility for the operations and support of MEHC. In 1996, Martha Eliot Health Center relocated to a new, state-of-the-art health facility at 75 Bickford Street in Jamaica Plain.

Today, MEHC represents Children's commitment to comprehensive family health care for the Bromley Heath, Mission Hill, Jamaica Plain, Roslindale, Dorchester, and Roxbury communities. MEHC has expanded into a health care delivery model offering primary care services including Pediatrics, Women's Health, Adolescent Medicine, Adult Medicine, Optometry, Nutrition, WIC, Human Services, and Laboratory Services. A community-based substance abuse treatment and recovery support program, case management, and home visiting services for parenting and pregnant women, HIV education, counseling and testing, youth peer leader program, and youth street outreach program augment the extensive array of preventive services.

Mission and Philosophy

The mission of the Martha Eliot Health Center is to promote and provide the best comprehensive health care to diverse multicultural communities.

MEHC respects the economically and culturally diverse population that it serves, and strives to deliver services in a competent and sensitive manner. It supports the community infrastructure by recruiting and employing staff that are directly from the community and whose profile is reflective of the population it serves.

MEHC is committed to preventing and improving management of chronic diseases. To achieve this goal, MEHC has undertaken several initiatives, including:

- employment of an HIV nurse case manager specialist
- coordination of an HIV counseling, testing, and prevention program with an in-house HIV specialty clinic
- plans to provide medical and ancillary clinical services for the Jamaica Plan HUD senior housing project (currently under construction)
- development of a pediatric asthma registry
- coordination of the "I'm iN Charge" (INC) program for children and youth at risk of developing diabetes.

MEHC is committed to developing interagency collaborations with community-based organizations to maximize service delivery to Boston neighborhoods. These partnerships hold

two primary objectives: to address public health problems, and to provide social support to clients extending beyond the context of routine health care – such as opportunities for training, mentoring, and career development. In addition, these collaborations encourage a learning environment for staff that is both challenging and supportive.

Specific examples include the Jamaica Plain Tree of Life (MEHC serves on the Health Care Planning Committee), Hyde Square Task Force, the Rally Program of the Curley School, Boston Asthma Initiative, and the Roxbury YMCA. MEHC's outreach programs are many and diverse, addressing the social and clinical needs of an underserved population, such as the annual Latino Health and Injury Prevention and Safety Fairs, Community Forums, and Obesity/Pre Diabetic youth program.

Structure

A 14-member MEHC Community Advisory Board (CAB) comprised of consumers, community residents, and programmatic experts provide leadership and guidance to Children's on health center community service initiatives. The CAB's membership profile is reflective of the patients and communities served by MEHC. Operationally, MEHC is placed within the hospital's Ambulatory Services Division.

Patient Population

MEHC's catchment area is characterized by high rates of unemployment, crime, teen pregnancy, and school dropout. In addition, poverty, sub-standard housing, frequently experienced racism and prejudice, and a lack of equal opportunities for youth profoundly affect the lives of MEHC clients. Socioeconomic stressors are further complicated by family instability, substance abuse, and community violence.

Specific health status indicators that occur with increased frequency in the MEHC patient population are perinatal morbidity/mortality, adolescent pregnancy, sexually transmitted diseases, low immunization rates, anemia, lead poisoning, chemical dependency, violence, school and behavior problems, asthma, and respiratory problems. In addition, HIV infection, along with other chronic health problems such as diabetes and hypertension, are characteristic of the underserved.

MEHC's patient population is primarily Latino (83 percent) or African American (15 percent). Latino patients are, for the most part, Caribbean immigrants, with more than 50 percent of patients using Spanish as their primary language.

In FY 06, 29 percent of patients were using Medicaid, 39 percent government-managed insurance, 8 percent commercial insurance, 5 percent other, and 19 percent were uninsured/self-pay.

2006 Accomplishments

Center Operations

- Completed a total of 55,260 patient visits to 8,069 patients.
- Implemented customer service initiatives throughout the health center for front line staff; and introduced Exceptional Care, Exceptional Service to management-level staff with plans to roll out to all staff over the next year.
- Continued to train department leaders and monitor center-wide data on provider productivity, patient flow, and wait times.

Adult/Women's Health

- Became a pilot site for the ABCD HIV/family planning integration program. MEHC successfully integrated confidential HIV counseling and testing into its family planning program, making counseling and testing more accessible to women's health and adolescent clinic clients.
- The Boston Healthy Start Initiative was renewed for another five years and currently provides case management services to more than 90 pregnant and parenting women. MEHC was one of two sites recognized nationally as "model" programs.
- HIV counselors continued to offer information about HIV, HIV risk status, screening, and counseling.
- MEHC successfully obtained funds and hired a nurse practitioner to launch an innovative chronic disease initiative.
- MEHC adult program staff initiated monthly health education trainings at a new senior housing site adjacent to the health center (the Julia Martin House).

Pediatrics/Adolescents

- The Reach Out and Read program continued to provide literacy promotion, guidance, and new books to children at MEHC.
- The pediatrics department continued to provide injury prevention activities including programs that distribute both car seats and bike helmets.
- The Adolescent Services Program (ASP) staff provide community outreach and education focusing on prevention of tobacco, drug, and alcohol use, plus street and dating violence prevention and STI/HIV prevention.
- Increased funding from the Crane Foundation to support the Adolescent Services program that includes intensive outreach, primary care/prevention education, peer leadership, and just-in-time mental health services.
- A summer adolescent program reached 50 youth who participated in regular weekly activities intended both to keep them off the streets and provide skills.
- Started the "Just In Time" mental health program to provide on-site mental health services in the adolescent clinic area.
- The Harvard Mentoring Program, implemented through the adolescent clinic, provides guidance to adolescents aged 11-16 with a focus on improving grades and classroom work by pairing each adolescent with a medical student who serves as a positive role model. The adolescent department strives to continue providing the best comprehensive care in all areas of service; to this end, the department's medical assistant distributed patient satisfaction surveys to all incoming patients to assess deficiencies and improve patient satisfaction.

- The Community Early Intervention Program (EIP) offers family-focused services for children from birth to age 3 who are at risk for poor developmental outcomes. Services are designed to provide families with resources to support the healthy growth and development of their children. EIP offers six types of early intervention encounters: home visits, center visits, screenings, child group sessions, developmental assessments, and ongoing follow up. In 2006, 141 children were enrolled in the Early Intervention Program.

Human Services

- MEHC continued to be part of the Jamaica Plain Children’s Mental Health Network, specifically its “Building Bridges” project. This project has initiated activities to address the mental health needs of children and their families in Jamaica Plain and surrounding communities. Its mission is to address the early identification and unmet mental health needs of children and families at risk by building and coordinating capacity at the community level: families, schools, community health centers, and hospitals. Specifically, an intern from MEHC and the school liaison from the Kennedy School of Government at Harvard worked closely with a handful of parents to plan and implement a weekly parent breakfast, which served as a vehicle for stronger parent involvement in many different aspects of school life.
- MEHC recently received a \$5000 grant to implement violence prevention and training programs.
- Ongoing mental health and case management support to the Bromley Health community.

Center-Wide Community Activities – mission of inclusion

- In September 2006, MEHC sponsored a Community Health Fair that included community-based organizations as well as health center workshops, such as: HIV Prevention and Education, Learning to Challenge Violence, Infant and Toddler Development, Diabetes Prevention and Nutrition, Kids and Asthma Workshop, Optometry, and chronic disease assessments. The health fair was a tremendous success with significant hospital support and community turnout.
- A Community Safety Fair was held in August, sponsored and supported by Children’s and the MEHC pediatric staff. In addition, World AIDS Day was organized by MEHC staff.
- Two diversity initiatives this past year included well-organized and attended Black History and Latino Heritage month celebrations.

Appendix B

Children's Hospital Primary Care Center Profile

Center Background

Children's Hospital Primary Care Center (CHPCC) was founded in 1972 in response to a community need for primary care. Many families were routinely receiving basic care in the hospital emergency room, rather than in a comprehensive primary care setting. These services were developed specifically targeted to the many problems facing urban children living in close proximity to the hospital. The care was and continues to be team-based. Specialized programs for lead poisoning, failure to thrive, and teen parenting were established; these programs continue today. Families quickly connected to the program and this connection has thrived over several decades.

Mission and Philosophy

The mission of CHPCC is to provide a "medical home" for urban children and others with social complexity or chronic disease. The medical home concept includes monitoring child health through key stages of growth and development, integrating the needs of the child and family, offering counseling for physical, behavioral, and emotional issues, providing disease prevention and treatment, and managing and coordinating specialized health care when necessary. Medical education also is important, and pediatric residents, fellows, and medical students actively participate in the many facets of patient care.

CHPCC developed services based on the following core values:

- primary care is the building block for the health and well-being of children
- the care must be child/family focused, accessible, continuous, comprehensive, coordinated, and compassionate
- the needs of urban and chronically ill children are highly valued
- health includes physical, behavioral, and emotional well-being.

CHPCC respects cultural diversity and strives to deliver culturally competent services. The staff of CHPCC is ethnically diverse. Care is available in English, Spanish, Portuguese, Russian, Mandarin, French and Haitian Creole; interpreter services are used for other languages.

Patient Population

CHPCC has an ethnically diverse patient population. An estimated 65% percent of the center's 11,000 patients live in Boston. Fifty-five percent receive Medicaid. The majority of patients are non-white. A rising number of recent immigrants from Africa, Asia, and Russia have used CHPCC services over the last few years. High levels of poverty, sub-standard housing, high crime rates, and high unemployment characterize these neighborhoods. Teen pregnancy is common. In addition, there are high rates of school dropout, family instability, substance abuse, and community violence. Specific health problems frequent in the CHPCC catchment area are perinatal morbidities and mortalities, adolescent pregnancy, sexually transmitted diseases, asthma, lead poisoning, drug abuse, violence, and school and behavior problems. Specialized services have been developed to address teen pregnancy, literacy, lead poisoning, failure to thrive, asthma, and school problems.

CHPCC is located on the ground floor of Children's Hospital just off Longwood Avenue. It is readily accessible by public transportation. Laboratory, radiology, and subspecialty services are available on site. The facility is handicapped accessible.

Specialty Services

The Young Parents Program (YPP) was launched in 1980 to provide comprehensive medical care, mental health services, and advocacy to high-risk, inner-city teen mothers and their young children. In 1995, YPP received a federal grant to incorporate intensive parenting education into the program for young mothers. Since 1997, YPP has been working closely with young fathers to develop a program that is appealing and tailored to the needs of young fathers in the community. In 2001, YPP received further five-year funding from the federal Office of Adolescent Pregnancy Programs. YPP also has been one of five pilot sites in Boston for a Men's Health Educator funded through ABCD Title X funds. In collaboration with community-based programs, YPP currently offers outreach, advocacy, job and school referrals, individual counseling, a parenting support group, health education, and primary physical and mental health services to fathers of children born to adolescent mothers. In 2006, there were 1,361 visits to YPP.

Advocating Success for Kids (ASK) addresses the growing number of children with school and behavioral problems through evaluation, referral for services, and advocacy. The ASK team includes a developmental pediatrician for educational assessments, psychologist, social worker, and university student volunteers. Through private funding, ASK has been able to add a half-time social worker dedicated to this program, thus increasing the capacity for multidisciplinary assessment and therapeutic work. A half-time psychologist was added in January 2006. The volunteers create a vital bridge of communication between parents and the school. They also link families with community-based school and social programs. The goal is to maximize communication between parents and the schools and negotiate services for Boston school children. In 2006, with seed funding from the Massachusetts Disability Association and U.S. Department of Health and Human Services Maternal and Child Health Bureau, ASK launched practice-wide structured developmental screening at CHPCC primary care visits. This represents a major effort in obtaining early identification of learning and developmental problems. In 2006, ASK served 180 children from CHPCC.

Healthy LINKS specifically targets children with asthma who receive their primary care at Children's. A registered pharmacist works with physician, nurse practitioner, and nursing staffs to provide asthma education visits. Patients are instructed on the correct use of inhalers, medicines, and peak flow meters. Environmental risks such as smoking, poor housing, and pets are addressed. The goal is to secure careful follow-up and home management plans for all CHPCC patients with asthma. In 2006, 415 patients were served.

Reach Out and Read (ROAR), a nationwide program that began in CHPCC in 1998, seeks to make early literacy a standard part of pediatric primary care. Providers encourage parents to read aloud to their young children and give books to their patients to take home at all pediatric check-ups from six months to five years of age. Parents learn from their medical providers that reading

aloud is the most important thing they can do to help their children love books and to start school ready to learn. Pediatricians, nurse practitioners, child life specialists, and educators help to make ROAR a success in CHPCC.

A Spanish Consultation Program provides coordinated, culturally appropriate care for Spanish-speaking children with complex medical needs. A team consisting of a bicultural pediatrician, resource specialist, and social worker sees the families. Coordination of subspecialty services, home medical equipment, and other services is provided.

A General Pediatric Consultation Program provides general pediatric consultation for children with previously undiagnosed medical symptoms. A pediatrician meets with the child and family for an in-depth evaluation and assessment, review of previous records, and physical exam. When necessary, the child is linked with appropriate subspecialty services.

A Child Life Specialist supported through private funds enriches the environment at CHPCC and makes it more child-sensitive. In collaboration with medical providers and social workers, the child life specialist uses play to prepare children for medical procedures, to reduce anxiety, and to manage behavior problems. The specialist creates a child-friendly environment in the waiting area, and gets to know and enhances CHPCC's ability to care for some of the center's most troubled children.

Nutrition

A part-time nutritionist is available to see families in conjunction with their medical visit to address issues of obesity, underweight, and special dietary needs. The availability of a nutritionist as part of CHPCC makes it easier for families to receive these services and for CHPCC to improve coordination of care.

In addition, the hospital's Growth and Nutrition Program, staffed by physicians, nurses, psychologists, nutritionists, and social workers, provides care to children who are severely underweight. A broad range of disorders associated with poor growth is diagnosed and treated through the program. Treatments include high-calorie diets, education, family services, and behavior modification programs.

One Step Ahead

CHPCC continued the One Step Ahead (OSA) program, an obesity prevention and nutrition program that uses a cross-disciplinary approach to address the complex roots that prevent maintenance of a reasonable and healthy weight and body mass index (BMI). Every child is diagnosed and monitored in a highly personal manner. CHPCC enables access to care that is rarely seen in inner-city communities while remaining cognizant of cultural/ethnic issues that may affect a child's diet. By analyzing the child's entire environment (family, school, health, education, social), the staff can develop a customized kaleidoscope experience. In 2006, 104 children were served.

Psychology

An attending psychologist provides evaluations and ongoing psychotherapy. Psychology services are fully integrated into medical and social services. In 2006, there were 312 psychology visits.

CHPCC FY06 Accomplishments

- CHPCC completed 35,660 patient visits.
- Healthy LINKS continues to provide intensive asthma education visits and clinical materials for families. Asthma education also is being offered at CHPCC-sponsored family events such as kindergarten registration and the camp fair.
- In conjunction with the Boston Public Schools, the ASK Program sponsored two on-site kindergarten registration days. Qualitative and quantitative evaluation has been initiated. An additional clinical day has been added.
- Structured developmental screening has been initiated and works in collaboration with Children's Early Intervention Program.
- ROAR provided new books to children between the ages of 6 months and 5 years and countless more 'gently used' books to older siblings.
- YPP completed a federally funded collaboration with Brigham and Women's Hospital and Boston Medical Center to provide parenting services to adolescent parents. A nurse practitioner provided baby-centered Touchpoints-guided medical exams to all newborns. Increased numbers of young fathers began attending medical visits.
- A staff social worker established the Proud Mamas teen mother rowing team. The team participated in a regatta in Holyoke, MA, in August 2006.
- The Rainbow Team continues to improve the care of children with special health care needs. The team is addressing issues of case management, medicines and durable goods, routine care, and general patient support services.

Appendix C

Adolescent/Young Adult Medicine Program Profile

In 2006, the Adolescent/Young Adult Medicine Program of Children's Hospital Boston supported 14,000 adolescent patient visits. In this program, physicians, nurse practitioners, dietitians, and mental health clinicians provide medical, gynecological, nutritional, and psychological care and counseling. The program provides second opinions for a wide range of medical problems and subspecialty consultations for eating disorders, HIV-positive and high-risk youth, and medical gynecologic and reproductive health issues, including menstrual disorders, delayed puberty, contraception, and sexually transmitted diseases.

Two programmatic examples of community outreach and community collaboration to improve care for adolescents and young adults are:

The Center for Young Women's Health (CYWH). The center was created in recognition of the urgent need for education, clinical care, research, and health care advocacy for adolescent girls and young women. CYWH, the first of its kind in the nation, offers health information, clinical care, and a variety of programs and services designed to educate and empower girls and young women ages 10-22. The CYWH website, www.youngwomenshealth.org, contains a variety of health related materials for teen girls. More than three million girls (ages 12-20), parents, health care providers, and others visited the web site in 2006. An additional 400 young women (ages 14-18) were served through local presentations with youth advisors and 170 girls participated in the Citywide Girl's Summit in August 2006.

Boston HIV Adolescent Provider and Peer Education Network for Services (HAPPENS). Boston HAPPENS (www.childrenshospital.org/happens) began as a network of health care and human service agencies, led by Children's, who collaborated to identify HIV-positive and homeless youth and connect them with health care providers. The hospital's Adolescent Clinic houses the adolescent-specific HIV clinical program. An interdisciplinary team provides health education, risk reduction, HIV counseling, and testing to adolescents and young adults. Through affiliation with the state health department, the program is able to test youth without cost and registration barriers as a DPH-affiliated HIV test site. Boston HAPPENS also provides primary care, HIV specialty care, reproductive health services, mental health services, case management, mental health support, and support groups to youth age 12-25 who are living with HIV. In FY06, HAPPENS provided outreach, care, or support to 39 HIV-positive youth, with 26 receiving medical care through the HAPPENS clinic, 30 receiving case management and outreach services, and 15 receiving individual or group mental health services from the team. During the year, 376 youth accessed HIV counseling and testing services, and three tested positive. Boston HAPPENS provided post-sexual assault follow-up (including monitoring and clinician and family support for those receiving HIV Post-Exposure Prophylaxis and serial HIV testing, and risk assessment and risk reduction counseling) for up to six months for 60 youth seen for sexual assault in the hospital's Emergency Department or referred from outside providers. The program also provides in-service training and consultation on adolescent HIV to residents, outside clinicians, community health centers, residential programs for at risk youth, etc. Many more at-risk youth, plus youth-serving providers and programs are reached through street and event outreach and

health education at health fairs and other community activities. In addition, more than 160 health care providers are served at “Wellness” or “Adolescent HIV” monthly meetings for community health workers and providers, and yearly “Adolescent and HIV” CME/CEU courses.

Research based in Boston HAPPENS also provided community benefit. The Adolescent Trials Unit (part of the 15-site NIH-funded ATN, or Adolescent Trials Network for HIV/AIDS Interventions) worked closely with community agencies in its prevention and clinical research subject recruitment, with one prevention trial (Proyecto Amistad) based at Martha Eliot Health Center, and access to clinical studies occurring both at the hospital and at the Sidney Borum Jr. Health Center and MEHC. The program’s community prevention project, Connect to Protect, developed and disseminated a youth resource directory (posted on the HAPPENS web site), conducted a venue-based HIV risk behavior and seroprevalence survey with community partners in Roxbury and Dorchester, provided technical assistance to several community partners in collaborative grant writing, and in this final year of funding has been disseminating results and lessons learned from ATN and Connect to Protect work to community partners, several youth networking groups, and neighborhood coalitions. A final report on this project is being prepared to share with community partners and local public health programs.

Appendix D

Child Protection Program Profile

The Child Protection Program of Children's Hospital Boston provides outpatient medical and psychosocial clinical assessment services to children who have been, or are suspected to have been, maltreated. Founded in 1972, the program consists of the AWAKE (Advocacy for Women and Kids in Emergencies) project, an outpatient child protection clinical services program (CPCS), and a child protection team (CPT) of hospital consultants.

The program includes a multidisciplinary group of professionals from the Departments of Medicine, Social Work, Nursing, Psychology, and the Office of General Counsel. Child Protection Team members, representing all of the above departments, are available around the clock to consult on cases of child abuse and neglect. These services are provided for approximately 1,500 cases each year, resulting in the annual filing of approximately 400 suspected child abuse or neglect reports to the Massachusetts Department of Social Services (DSS).

Each member of the CPP plays a vital and integral role in the mission of the program, which is to evaluate and provide care for patients at Children's who may have been abused or neglected and to implement child protection and safety. The Child Protection Program seeks to increase the awareness, knowledge, and prevention of child abuse within the hospital and the community.

The Child Protection Program's three program areas include:

The Advocacy for Women and Kids in Emergencies (AWAKE) Project, founded in 1986, is a domestic violence and child abuse program that provides free, community-based advocacy services to individuals and families living with domestic violence or partner abuse. The project seeks to bridge the gap between child abuse prevention and domestic violence advocacy through a variety of activities. AWAKE staff provide consultation to hospital or health center staff regarding appropriate patient care and interventions when domestic violence is suspected. In addition to this crisis response work, AWAKE provides training to hospital staff and in the community, both locally and nationally. In 2005, AWAKE staff served 253 clients and 227 children. In addition to direct services, the AWAKE program also provides training and case consultations to community providers.

An AWAKE on-call advocate is available to respond to requests for service Monday through Friday, 8:30 a.m.-5p.m. During off-hours, the CPT consultant on call provides immediate consultation in those cases possibly involving domestic violence, but will refer individuals in need of ongoing domestic violence advocacy back to the AWAKE staff for immediate follow up on the next business day.

The Child Protection Clinical Services (CPCS) Program is an outpatient child maltreatment clinic staffed by CPP psychologists, nurses, social workers, and physicians. The CPCS provides outpatient evaluations and treatment for children who are suspected of having been maltreated while offering parents and other treatment providers expert consultation on a range of issues

related to child maltreatment. CPCS staff may offer expert consultation on symptoms of trauma, normative child development, navigation of the child protective service delivery system, and community resources.

Children may be referred to the CPCS by Children's clinical staff, DSS, their pediatricians, or parents or guardians. In cases where it is appropriate for the referred child to be evaluated at CPCS, evaluations may be limited to medical assessments, including a medical exam and other outpatient studies, or may include a series of one-on-one interviews with the child and his or her primary caretakers. Typically, the CPCS uses a three-session evaluation model. Referrals for additional evaluation or treatment may be made on completion of the outpatient evaluation. In addition, CPCS staff offer short-term trauma treatment and treatment for children ages 12 and under who may be demonstrating sexual behavior problems. Here, too, CPCS clinical staff will work closely with parents/guardians to determine the best course of treatment for their child. Finally, the CPCS team provides training to the hospital and local community agencies, mental health centers, and schools.

The **Child Protection Team (CPT)** is a multidisciplinary team of consultants comprising physicians, attorneys, psychologists, social workers, nurses, and advocates, including several members of the AWAKE and CPCS teams. CPT provides 24-hour, on-call coverage, expert consultation services, professional training, and case-specific support to hospital staff on issues of child maltreatment. In 2006, the Child Protection Team received an estimated 1,500 referrals to assess children with child abuse concerns at Children's ambulatory clinic sites and emergency department. Additionally, the team includes a nurse liaison to DSS who works collaboratively with hospital and DSS staff to respond to the unique needs of children being treated at Children's while in the legal custody of DSS.

Participation in Community Based Program Committees. CPP staff are active and contributing members on advisory and program development committees associated with several community-based agencies and evolving local programs. These include the Children's Advocacy Center of Suffolk County, the Family Justice Center, the DSS Right from the Start Project, the Pediatric Sexual Assault Nurse Examiner Advisory Committee, the Governor's Commission on Child Abuse and Neglect /Domestic Violence and Sexual Assault, COBTH, the NASW Domestic Violence Committee, the Fatality Review Board, the AAP Massachusetts Chapter, the Shaken Baby Coalition of Greater Boston, and the DSS Case Review Committee. These activities are aimed at addressing the broader social and systems issues that impact the health and welfare of children in our communities.

The Suffolk County Children's Advocacy Center (CAC) offers children who have been abused access to medical professionals, police officers, DSS, social workers, mental health professionals, prosecutors, victim witness advocates, and domestic violence professionals. The outcome of the assessment is a comprehensive safety plan for the child as well as a treatment plan including appropriate services. In 2006, CAC served 895 children with 19 percent of them being between the ages of 0 and 6 years, 25 percent between 7 and 12 years, and 48 percent between 13 and 18 years (8 percent were of unknown age). Seventy-two percent of the children were female and the majority (70 percent) of the referrals related to suspected sexual abuse. Nearly 50 of the youths referred to the CAC were exploited through prostitution.

Children's supports the CAC by providing human and financial resources to the program. The hospital provides the time of medical professionals (a physician, a social worker, and a psychologist) one day a week to conduct interviews, develop assessments, and compose safety plans. The hospital also is the single largest contributor of capital costs incurred in moving the center to a new location in Brighton and its incorporation into a larger program called the Family Advocacy Center.

Community- Based Direct Services. The AWAKE PROJECT staff currently provide school-based, psycho-educational groups in urban middle schools. Initiatives are underway to expand the school-based component of the Child Protection Program's community based work. CPCS staff are involved in initiatives to provide school-based trauma evaluations and support to educators.

Training. The Child Protection Program staff provides training on a range of topics related to family violence and child maltreatment to hospital staff and the community. Training is designed to provide clinicians and other professionals with a strong clinical foundation and pragmatic information that will prepare them to respond effectively to incidents of child maltreatment or family violence in a multitude of settings.

Trainings are designed to respond to the needs of each unique audience. Topics may include:

- historical contexts that have fostered family violence and its prevalence today
- indicators and symptoms of family violence, child maltreatment, or neglect
- diversity and its implications in practice
- screening skills
- appropriate responses to disclosure
- legal mandates
- documentation standards.

The range of training forums is diverse. For example, each year CPP staff train DSS front-line workers on the identification of child abuse and neglect. Additionally, program staff regularly lecture at the Harvard Schools of Education, Public Health, and Medicine, and the Boston University School of Public Health. Finally, each year, several CPP team members present at both local and national conferences on a broad range of child protection topics.

In addition, and with the support of the Sylvia Krakow Memorial Fund, the CPP offers a bi-monthly Interpersonal Violence Seminar Series featuring local and nationally recognized leaders and scholars presenting on a range of topics from violence prevention, social policy, and advocacy to child maltreatment research and offender treatment. In addition, throughout the year, CPP staff offer Child Protection Grand Rounds on topics such as Munchausen by Proxy, Shaken Baby Syndrome and the Law, Child Sexual Abuse in the Context of Domestic Violence, Protective Services, and the Medically Complex Child, among others.

Appendix E

Support for and Partnerships with Community Health Centers

Community health centers are a critical part of the health care “safety net” for traditionally underserved children and families in Boston. They provide primary care, including medical, dental, and mental health services, particularly to the uninsured and underinsured. Without community health centers, many families would go without regular health care, or would use hospital emergency departments. Health centers also help connect patients with social services and other community resources, thus giving families an even broader system of support.

Recognizing the importance of community health centers as essential partners in ensuring access to care, Children’s Hospital Boston provides support to 11 other health centers around the city of Boston through affiliation agreements (in addition to its own Martha Eliot Health Center in Jamaica Plain). These partnerships take the form of financial support, programmatic support, and provider support. In turn, community health centers are critical partners in the hospital’s efforts to increase prevention, early intervention, and treatment efforts for the most prevalent health concerns facing children and youth in the city.

Financial Support

Affiliation agreements allow Children’s to provide unrestricted funding for pediatric programs. Since FY99, Children’s has provided funding to community health centers to ensure that children throughout Boston have access to a medical home.

Programmatic Support

Children’s is committed to helping children lead healthy, safe, and active lives; to ensure that they enter school ready to learn; and to encourage them to be engaged in the world around them. To accomplish this, the hospital must address the most serious health issues faced by the city’s children. These problems – asthma, obesity, unintended and intentional injury, and mental illness – are best addressed by a coordinated and child-centered program of prevention, treatment, and education. By partnering with community health centers, the hospital is able to broaden its reach into these communities and provide a continuum of needed services in these issue areas to children and their families. Strategies include the following:

- Community health centers are on the front lines of the efforts to deliver more mental health services to children and youth. By working with the health centers, Children’s Department of Psychiatry is able to reach more children with much needed psychiatric services. Through the *Children’s Hospital Neighborhood Partnerships*, the hospital has placed psychiatrists in South Cove Community Health Center, Dimock Community Health Center, and Early Head Start at Dimock, Brookside Community Health Center, Southern Jamaica Plain Community Health Center, and the Martha Eliot Health Center. This provides needed support to clinicians at the health centers, particularly in the area of medication management. For more information, please see Appendix G.
- Too many children with behavioral and developmental problems are not identified early enough. Primary care providers have identified a need for specialized assessments. As the

“family doctor” to a large number of Boston children, community health centers provide the best opportunity to reach children with developmental needs early. Children’s *Advocating Success for Kids (ASK)* program works with community health centers to provide educational and developmental assessments for children and youth with emotional, behavioral, and learning difficulties, and offers case management to families. ASK screens and assesses children at Bowdoin Street, Joseph Smith, and Martha Eliot health centers. In 2006, staff served 180 children in the Children’s Hospital Primary Care Center and 64 at community health centers, totaling 244 children. For more information, see Appendix G.

- Community health centers were among the first providers to become aware of the growing problem of obesity and overweight in children and youth. Through the *Fitness in the City* initiative, Children’s offered financial support for fitness promotion and obesity prevention programs at eight community health centers. Hospital staff also provide support for implementation and evaluation of these programs. In return for these funds, health centers will share their successes and lessons learned with one another and with the hospital. For more information, see Appendix I.
- Primary care providers at both Children’s and community health centers are focused on prevention. One area where prevention activities have potential to be successful is in injury prevention. The hospital is supporting community health centers in their efforts through the distribution of materials and products. The *Injury Free Coalition for Kids* program has distributed bicycle helmets to health centers who have requested them. In FY06, the program distributed 1,200 sports helmets at Children’s Hospital Primary Care Center and Martha Eliot Health Center. The Injury Prevention Program also distributed 109 car seats to families at MEHC. For more information, see Appendix H.

In addition to programmatic support of these focus areas, Children’s supports more general programming at the health centers. For example, recognizing that oral health is an important component of overall health, Children’s has committed support to the dental clinic at Dimock Community Health Center for five years.

Provider Support

Children’s is committed to helping providers at community health centers offer the best possible care. The hospital subsidizes the credentialing of community health center physicians to be on the hospital’s medical staff. The hospital also provides the health centers with computer connectivity to its hospital information system via the Internet to ensure access to patient information. The hospital offers technical assistance as needed to provide all patients with the highest quality care. In addition to providing information on programs for continuing medical education and subsidizing the cost for staff to attend educational offerings, the hospital has developed specific training opportunities:

- Through the *Emergency Pediatrics Project*, a Children’s Emergency Department physician offers training in emergency preparedness for community health center providers and other staff. This training focuses not on large-scale disasters, but rather on what to do in case of an emergency with an individual pediatric patient. Following a mock patient “code,” the physician debriefs the staff, goes over procedures, provides necessary supplies, and returns

for a follow-up review several months later. The hospital also subsidizes a pediatric advanced life support course for community health center staff.

- The hospital offers community health center staff the opportunity to see successful programs in action through the *Community Shadowing Program*. To date, four health center clinicians have “shadowed” hospital physicians who are running programs such as OWL (Optimal Weight for Life), a multi-disciplinary clinic dedicated to the evaluation and treatment of children who are overweight/obese through comprehensive medical evaluation, nutritional counseling, behavior modification and group therapy. The program is available to all community health center clinicians in whatever field they choose. Clinicians also are able to see the full range of hospital activities.

Appendix F Asthma Programs

Asthma is the leading cause of hospitalization at Children's. The hospital is the largest provider of clinical services to children with asthma in Massachusetts, with almost 16,000 inpatient and outpatient visits for asthma as a primary or complicating diagnosis in FY06.

Changing these statistics requires an all-out effort, combining patient care, research, training, community health and education, and public policy advocacy all directed toward reducing the burden of this serious chronic, but very manageable, disease. Children's has focused its programs to improve asthma management in a child's everyday life. With supportive resources and education, children with asthma can lead healthy and active lives.

Direct services are provided for inpatients (through the Emergency Department or the Short Stay or Intermediate Care units) and outpatients (through the Primary Care Center, Adolescent Medicine, Pulmonary Clinic, and Allergy/Immunology Department).

The hospital is one of a few "centers of excellence" for asthma **research** in the U.S., having received a \$1.2 million annual NIH grant to establish an Asthma and Allergic Disease Research Center. Immunology research – understanding the immune mechanisms involved in asthma – is a prime focus. Current research projects include studies on the role of certain cells in the effective treatment of asthma and on mouse and dust allergens in the home and in school settings.

In addition to **training** research fellows, the hospital provides ongoing training to medical residents, staff nurses, and school nurses. An asthma clinical nurse specialist teaches residents how to discharge children with asthma medications and how to create asthma action plans, meets monthly with staff nurses for asthma education, and serves as the hospital's nurse consultant for asthma. The hospital offers asthma training to schools and school nurses on request. Thus far in FY06, 40 trainings or presentations were made, reaching more than 750 participants.

In the **community**, Children's asthma programs cover a full continuum of care: prevention, evaluation, treatment, parental support, case management, training and education, and policy advocacy. This approach engages the entire community – families, schools, community health centers, advocacy groups, and community based organizations – and stresses treatment of the child in the context of his or her environment.

The Community Asthma Initiative (CAI) helps children and families improve how they manage asthma. By supporting families with case management, home visits, and asthma education, CAI aims to reduce the number of asthma-related emergency department visits and hospital admissions

Partners in the hospital's asthma initiatives include the Boston Public Health Commission, the Boston Asthma Initiative, the Boston Public Schools, the Boston Urban Asthma Coalition, the Asthma Regional Council, and other community and city government partners.

To improve access to asthma education, the hospital is a lead partner and funding source in a major asthma awareness campaign targeted to Boston neighborhoods with particularly high asthma rates. Children's joined with partners WGBH, the Boston Public Health Commission, the Boston Public Library, and the Boston Children's Museum to launch a campaign featuring the popular children's TV program "Arthur." The "Kids with Asthma Can... Asthma Management Campaign" emphasizes the three main quality-of-life indicators for children with asthma: playing, sleeping, and learning. The campaign includes several elements: a traveling "Buster" play with characters from the show, presented at 80 sites throughout the city; a series of Family Asthma Education Nights held at Boston Public Library branches; educational materials to help children learn about asthma; and a campaign with advertising on buses and the T and in transportation shelter/information areas in the targeted neighborhoods.

In FY06, Children's provided almost 16,000 asthma-related patient visits in the hospital and reached more than 3,400 children, youth, parents, and caregivers with asthma services and education in community settings.

Overall Asthma Goal: Improve the self-management of asthma by children and their families.

Overall Approach:

The hospital's approach to asthma is comprehensive, including:

- **A case management**/home visitation program offering the full continuum of asthma services
- **Education and public awareness** efforts for families, schools, and community-based organizations through speakers' bureaus, health fairs, distribution of asthma education materials, and public-private partnerships
- **Public policy advocacy** efforts to ensure adequate coverage for asthma education, case management, home visitations, environmental assessments, and asthma medications and device
- **Public awareness** efforts to help increase the number of families practicing good asthma management in Boston.

Key Partners:

Key partners in the hospital's asthma efforts include public and private agencies and organizations, all working to improve the health and lives of children with asthma. They include the Boston Public Health Commission (BPHC), the Boston Asthma Initiative, the Boston Urban Asthma Coalition, and others.

- Developing safe and healthy activities that promote access to care, physical activity, psycho-emotional wellness, and asthma knowledge are goals of a multi-pronged program with the BPHC called the *Asthma Health Project*. Among the programs are: the annual Boston Asthma Games, which offer safe participation in athletic activities along with asthma education; the Boston Asthma Swim, offering asthma education and swimming exercise in three sites in Dorchester, Jamaica Plain, and Charlestown; and the Boston Asthma Summer Program, a week-long camp for urban children with moderate asthma.
- The hospital is a member of the *Boston STEPS* initiative and an active participant in the BPHC's working group that is helping to implement a community mobilization grant from the CDC to reduce the burden of asthma, as well as obesity, diabetes, and fitness, in seven Boston neighborhoods.

- The hospital is an active member of the *Boston Urban Asthma Coalition*, comprising community-based organizations, government agencies, and others all working to stem the rising prevalence of asthma in inner-city Boston.
- Children’s also supports, operationally and financially, the *Boston Asthma Initiative*, aimed at improving asthma management through student education and mentoring, school- and home-based assessments, and provider education.
- To help raise awareness across the city about asthma management, Children’s joined forces with WGBH, BPHC, the Children’s Museum, and the Boston Public Library to launch the “Kids with Asthma Can...Asthma Management Campaign.”

Asthma Goals:

- Provide a comprehensive asthma program that improves access to and asthma services for children, promotes healthy home environments, and improves asthma knowledge among children and families
- Increase the capacity of health care providers, schools, and community organizations to provide appropriate asthma education and physical activity programs to children and also improve asthma knowledge among children and families
- Reduce disparities in childhood asthma outcomes, raise public awareness, and advocate for public policy changes to ensure that children and families have access to the educational and medical resources they need
- Involve families and caregivers as well as health care providers and school personnel, to help increase the number of families practicing good asthma management in Boston, through the “Kids with Asthma Can...” campaign.

Strategies:

- Identify patients to participate in CAI through Children’s Emergency Department visits, admissions, and provider referrals
- Provide general asthma and medication management education
- Collaborate with Boston Asthma Initiative to provide home visits, environmental assessments, and educate families about how to lessen asthma triggers
- Participate in outreach and community events around asthma issues
- Conduct educational workshops to train providers and families
- Collaborate with the New England Asthma Regional Council and Boston Urban Asthma Coalition to develop legislation and advocate for public policies that ensure families have access to education and medical resources
- Participate in community outreach thorough public awareness initiatives such as the “Kids with Asthma Can...” campaign.

Asthma Accomplishments for FY 06:

- 197 patients were identified to participate in the case management program, and 104 were enrolled; 66 families received home visits
- Initial results from the Community Asthma Initiative are promising. At baseline, 87 percent of families reported that asthma limited their child’s physical activity, and after six months, 32 percent reported a limitation. Sixty-six percent had an emergency department visit at

baseline, and after 6 months, only 21 percent reported a visit. At baseline, 97 percent reported a missed school day, and after six months, only 65 percent reported a missed day.

- Asthma Health Project staff completed 43 educational speaking engagements to educate an estimated 780 people about asthma management.
- Staff participated in 16 community events to provide families with asthma education. These fairs reached an estimated 2,290 people.
- In addition, a total of 207 children participated in the Asthma Health Project, including 88 children in the Boston Asthma Games, 42 children in the Boston Summer Asthma Program, and 77 children in Boston Asthma Swim.
- With the support of 30 legislative cosponsors and 26 community organizations, a legislative Act Relative to Coverage for Asthma Education and Training was filed.
- The “Kids with Asthma Can...” campaign was launched in August 2006. To date, 36 plays have been performed.

Appendix G Mental Health Programs

Children's Hospital Boston is one of the leading providers of mental health services to children in Boston, with more than 14,000 outpatient visits, 800 medical consultations, 400 inpatient admissions for mental health care in 2006.

Research has shown that mental health programs with comprehensive, integrated, community-based approaches are most effective in preventing such mental health problems as conduct disorder, and alcohol and drug abuse. In addition, interventions involving family, school, and community are more likely to be successful than efforts aimed at a single domain. Further, efforts linking outreach and preventive programs run through schools and other community-based settings with clinical services at mental health clinics, community health centers, or school-based health clinic settings have been found to be effective.

All these approaches are evident in Children's comprehensive approach to mental health care, which includes not only direct patient care, but also research, training, community health, and public policy advocacy.

Much of the mental health care provided by the hospital is offered through three **direct-care** departments, all operating integrated and comprehensive services: Psychiatry, Social Work, and Developmental Medicine

The Department of Psychiatry has a community of **researchers** whose work focuses on neurobehavioral development, mood disorders, attention/conduct disorders, and coping/medical illness. Mental health research is based on the premise that brain, behavior, and environment comprise a dynamic, integrated system in the developing child, and the key to progress is in-depth study, appreciating and then defining the complexity of the developing child.

The hospital provides mental health **training** to clinical providers as well as school and community health center staff members about topics such as mental health issues in the school setting, behavioral health issues, violence prevention, pediatric developmental screenings, advocating for patients, psychopharmacology, and how to advocate for public policy changes.

In the **community**, limited access to child mental health services is well-documented and represents a growing problem. Urban children and families in particular have problems with finding and accessing culturally and linguistically appropriate mental health services. These access barriers can be further complicated when care is not provided in a community setting. Children's has recognized this fact and has expanded its mental health services by providing psychiatrists in community health centers and other settings. The hospital also delivers care through prevention and wellness initiatives based in community health centers and schools, and through other community organizations. These initiatives comprise the *Children's Hospital Neighborhood Partnerships (CHNP)*. CHNP works to increase access to mental health services, improve the quality of services available, build capacity in partner organizations, and strengthen the ability of children to function successfully. Mental health initiatives in the community also

provide screening, evaluation, education, support services, case management, treatment, and advocacy for children with mental health problems. By integrating and linking these efforts, and by deepening and intensifying the hospital's relationships with community partners, community capacity is strengthened to help Boston's children grow up strong and do well in their daily lives.

As discussed previously, the hospital also has funded expansion of mental health services in the community by placing psychiatrists in five community health centers. The hospital also has expanded access to services by developing and supporting school- and family-based support and specialized mental health care.

The CHNP initiative was recognized as a "notable program" in the Attorney General's 2006 Community Benefit Program Awards. Its treatment team also received a 2006 National Alliance for the Mentally Ill/Eli Lilly "Heroes in the Fight" award, given to individuals and groups who work tirelessly on behalf of those dealing with mental illness.

Because of the importance of mental health and the difficulty in accessing services, the hospital has developed the only mental health **advocacy** program of its kind in the U.S., the *Child and Adolescent Mental Health Advocacy Initiative* (CAMHAI). Its goal is to bring about broad change in the mental health system and in mental health services through raising awareness of mental illness and highlighting barriers to care.

In the 2005-06 legislative session Children's actively targeted 10 bills, including supporting a bill to increase mental health benefits, mental health parity law reform, prevention strategies for shaken baby syndrome, and improved evaluations of children who have been sexually traumatized. Through CAMHAI, the hospital also worked toward successful opposition to a bill attempting to limit access to psychotropic drugs.

In addition to prevention and wellness, direct services are offered in four primary care settings in Boston through the *ASK (Advocating Success for Kids) Program*. ASK offers "one-stop-shopping" for access to services for children with medical, emotional, and behavioral issues or school-functioning problems and learning delays. Services include assessments and screenings to determine a child's school and emotional functioning, and development of recommendations for educational and social services. The ASK program also provides extensive follow-up with parents, teachers, and school staff.

In FY06, Children's provided more than 14,000 outpatient visits, 800 medical consultations, and 400 inpatient admissions for mental health care. In addition, Children's provided services to an estimated 3,700 children and youth, 1,900 teachers, school staff and community providers, and 650 parents in school and community settings.

Overall Mental Health Goal: Improve access to prevention and treatment services for children with mental health care needs.

Advocating Success for Kids (ASK).

Goals:

- Increase access to services for parents and children with school problems and developmental needs to promote healthy home environments and to help children do better in school
- Increase capacity for health care providers to better manage developmental and school problems in their own setting
- Increase parental understanding of their children's issues, the educational laws that support families, and how to navigate the school and health systems
- Ensure the best care for patients and families and respond to referring provider needs

Strategies:

- Identify children to participate in the program through primary care providers
- Create action plans with recommendations tailored to meet the needs of every child
- Help parents connect with recommended services
- Provide support to parents of children with school problems
- Train providers to help identify and manage children with learning, developmental, and emotional/behavioral issues
- Support providers and clinical staff and provide consultation as needed
- Educate and train teachers how to manage behavioral problems in the school setting
- Educate and empower parents to learn more about and help manage their child's diagnoses

Children's Hospital Neighborhood Partnerships (CHNP).

Goals:

- Increase access to mental health services for unserved and underserved children and families
- Improve the quality and effectiveness of mental health services by providing training, support, and professional development opportunities for practitioners from diverse disciplines
- Build the capacity of partner organizations to respond to the needs of the population, by increasing critical knowledge, skills and awareness relevant to mental health concerns
- Strengthen children's ability to function successfully across domains (home, school, neighborhood, work) and relationships (family, peer)
- Assure the best delivery of care, work with multiple systems such as health centers, schools and Head Start centers
- Support state-wide collaboration to determine appropriate mental health policy

Strategies:

- Identify children in need of services, and provide services that are available according to need and regardless of ability to pay
- Provide mental health training and consultation to school staff/administrators
- Provide training for future community-based mental health professionals
- Conduct prevention work in school-based partnerships for staff, administrators, trainees, nurses and teachers
- Collaborate with health centers, schools, Head Start and ABCD
- Work with Children's Child and Adolescent Mental Health Initiative and the Massachusetts Society of Prevention to Cruelty to Children to support the mental health advocacy campaign

Key Mental Health/School Functioning Program Accomplishments for FY 06:

Advocating Success for Kids (ASK)

- Served 244 children, of which 124 were new consultations, and provided 362 follow-up consultations; 180 were in CHPCC and 64 were in community health centers
- Provided support and established relationships with 94 schools and 4 community health centers
- Developed website for providers in primary care settings with “how to” tools for identifying and screening learning, developmental, and emotional/behavioral issues. As of January 2007, the website has had 817 visits
- Trained 361 providers in community setting, and provided education and support for 261 parents
- Provided feedback and consultation to 125 community providers
- Surveyed 65 parents (79 percent reported a high satisfaction with the ASK Program), and surveyed 72 providers (95 percent reported being highly satisfied or very satisfied with ASK)

Children’s Hospital Neighborhood Partnerships (CHNP)

- Partnered with 18 Boston schools (15 BPS, 2 private and 1 parochial)
- Partnered with Judge Baker Children’s Center and five community health centers – Dimock, South Cove, Martha Eliot, Southern Jamaica Plain, and Brookside
- Served a total of 3,447 children: 1,135 children received direct treatment and consultation services, and 2,312 students and 366 parents served through prevention activities
- Provided mental health training and consultation to 1,599 staff/administrators and trainees, including school nurses, primary care staff at community health centers, and teachers
- Provided 629 consultations to school staff and administrators
- CHNP offers an array of prevention services to each partner. Prevention work is offered in response to problems emerging from specific students or groups, or following events that have impacted the school. In FY06, 2,312 students were served in prevention activities, and 366 parents through outreach and support services.
- CHNP’s two large-scale prevention initiatives include:
 - Family Connections, which works with children, families, and staff to help create positive interactions in Head Start for families facing difficulties. With funding from Boston ABCD and the U.S. Department of Health and Human Services, the program serves seven Early Head Start and Head Start Centers and provides city-wide training conferences for Head Start staff.
 - The Swensrud Depression Prevention Initiative, which works to prevent and treat depression in school-aged children and train educators and parents about mental health issues through: teaching children and teens how to identify depression and promote overall mental health; training educators and parents to recognize the signs of depression and other mental health problems; and the use of innovative tools for the prevention of mental illness.
- Child and Adolescent Mental Health Advocacy Initiative (CAMHAI) initiated work with the Massachusetts Society for the Prevention of Cruelty to Children to develop a report with recommendations to improve the mental health care system; and started planning to launch a major advocacy campaign in 2007 to get the recommendations implemented.

- CHNP received the Heroes in the Fight Award-Treatment Team from the National Alliance for Mental Illness (NAMI) in November 2006.
- CHNP received a grant from Jane's Trust to support services in two impoverished BPS elementary schools over two years.

Appendix H Injury Prevention Programs

Injuries – both unintentional and intentional – are the leading cause of death for children ages 1-19 in Massachusetts and result in 250,000 emergency room visits in a year. Unintentional injury is the leading cause of death for persons ages 1-34, and accounts for approximately 15 percent of medical spending from ages 1-19. Intentional injury or violence to children and young people – everything from physical and sexual abuse to suicide – is an increasingly serious problem, particularly in urban areas.

As part of its 2006 needs assessment effort, the hospital surveyed Boston families to help identify community concerns and gaps in current injury prevention programs. Based on their recommendations and data analysis, the most needed programs today are those that can respond to intentional injury – the result of the recent surge of violence in the city.

Children’s is addressing prevention of both unintentional and intentional injuries through a comprehensive effort that encompasses direct services, research, training, community health initiatives, education, and public policy advocacy.

Its **direct services** include a trauma department within the hospital’s Department of Surgery that ranks in the top 10 hospitals in the U.S. in terms of volume, a Division of Emergency Medicine that treats 11,000 injury patients each year, a Regional Poison Control Center and Division of Sports Medicine (see below), and other services that treat both unintentional and intentional injuries.

Research efforts include a “Safer Homes” study that is expected to provide new data on injury incidence; there is evidence that water-, bicycle-, and poisoning-related injuries seen in the hospital’s Emergency Department have decreased. Another study, a “Kids in the Back” observation program, is collecting data on children riding in the back of cars and those using booster seats, plus adults using safety belts, to provide data for developing an effective intervention.

Training efforts target staff at both Children’s and Martha Eliot Health Center. Staff have been trained in fitting bicycle helmets. A hospital-sponsored course on child and passenger safety is being prepared for staff. Nurses have been trained in testing car seats. And Safer Homes home visiting staff have been trained in the intervention.

Advocacy efforts focus on child passenger safety, bicycle and wheeled sports safety, poison control, and child protection, and include work toward enacting a primary seat belt enforcement law, prevention of shaken baby syndrome, and funding for staff training and response to severe physical and sexual traumas.

In the **community**, the hospital’s **unintentional injury** prevention program is carried out through its selection as a site for the *Injury Free Coalition for Kids (IFCK)*, a national childhood injury prevention program of the Robert Wood Johnson Foundation. The Boston program’s goal

is to reduce injuries to children under the age of 15 in Jamaica Plain over a four-year period. IFCK has a safer homes program, focused on reducing the risk of injuries from fire, poisoning, and falls; car seat and sports helmet safety programs, both of which involve education and distribution of car seats and sports helmets; and is actively involved in outreach by participating in community health fairs and events.

Children's also has a strong commitment to help prevent sports-related injuries in children. The hospital's Division of Sports Medicine provides comprehensive assessment, treatment, and follow-up care to children, adolescents, and young adults with sports-related orthopedic injuries. In addition to providing care at the hospital, the division also brings its resources to the community through the Boston Public Schools Sports Medicine Initiative. Staff and orthopedic residents coordinate and supervise medical coverage for BPS sporting events; in 2006, staff contributed more than 100 hours of time at BPS events. The division also has provided medical coverage for a variety of mass-participation sporting events such as the Boston Marathon, the Bay State Games, events at the Reggie Lewis Track and Athletic Center, and other summer sports camps and recreational programs.

A variety of hospital-based programs and community partnerships have been developed to reduce the prevalence of **intentional injuries**, including child abuse and youth violence.

Hospital programs include clinical assessment services for those who have been maltreated, a 24-hour consultation service, and an advocacy program for battered women and their children. The hospital also partners with government agencies and others to prevent and treat children who are at risk or have been neglected or abused. Children's has provided both clinical and financial support to the Suffolk County Children's Advocacy Center, which treats children who have been abused.

Children's provided more than \$1 million to support initiatives through the spring and summer of 2006 to promote peace and prevent violence. The funds supported more than 30 community organizations and city government agencies in developing and implementing initiatives designed to engage youth, provide opportunities for training, and offer role models in a positive work environment. These included: securing 156 paid summer job placements for youth (including 36 students hired at Children's) by providing funds to city and community programs; access to recreation and youth development opportunities such as camp scholarships for 80 Boston children from Martha Eliot Health Center and Children's Hospital Primary Care Center; funding renovations at the Melnea Cass Memorial Pool in Roxbury; supporting activities at the BELL Summer Program; funding for 10 community health centers to develop violence prevention or recreation programs; and a series of grants to 12 community organizations for innovative programs such as peace education at a child care center, expansion of recreational opportunities at local YMCA's, and peer leadership programs.

In FY06, Children's provided treatment to an estimated 11,000 children through Emergency Medicine, and hospital-based prevention and protection services reached more than 1,700 children. In addition, the hospital reached almost 3,000 children, youth, parents, and caregivers in community settings.

Overall Injury Prevention Goal: Reduce the incidence of mortality and morbidity due to childhood injuries.

Injury Prevention Goals:

- Child bike safety: reduce the incidence of unintentional injuries in certain geographical focus areas in the City of Boston
- Motor vehicle safety: decrease the incidence of hospitalizations as a result of the failure to use booster seats, car seats, and seatbelts in geographical focus areas
- Home safety: reduce harm from home injuries in geographical focus areas
- Safety awareness: increase community awareness around safety issues through educational workshops and community events, as well as training parents and providers.

Strategies:

- Target community events to reach children in schools in Jamaica Plain and Roxbury
- Distribute sports helmets and provide training on how to correctly fit and wear them
- Collaborate with community health centers and other organizations to provide helmets and education
- Distribute car seats and provide training to families on how to properly install them
- Hold a car seat checkpoint in the community for families to have their car seats checked by safety technicians
- Collaborate with community-based groups to make home visits to targeted families to assess injury risks in the home
- Distribute carbon monoxide detectors and provide education to families

Injury Prevention Accomplishments for FY 06:

- Through community outreach and events and partnerships with community health centers, the Children's Hospital Primary Care Center, and Martha Eliot Health Center, 1,200 sports helmets were distributed to Boston children, and 109 car seats were distributed to 63 low-income Boston families.
- The injury prevention staff participated in 26 community safety events and health fairs, which reached an estimated 1,085 parents and 1,740 children.
- Hosted the first car seat checkpoint with 50 families in attendance; 63 car seats were installed.
- 39 families received home assessments, and 37 received carbon monoxide detectors. For families who received home visits, 62 percent of families reported using cabinet safety latches at the initial visit and 87 percent at the follow up visit; 51 percent of families reported having a fire safety plan at the initial visit and 91 percent reported a plan at the follow up; and 64 percent reported using safety covers on electrical outlets at the initial visit and 100 percent were using at follow-up.
- Two parent educational workshops were held.

Appendix I

Fitness and Nutrition Programs

Obesity is a complicated medical, social, and lifestyle issue for children, especially children living in urban areas. Children who are struggling with being overweight or who are at risk need access to specialty medical services, nutrition education, and recreational opportunities, which may not always be available in health care settings. Thus, Children’s Hospital Boston’s approach to this issue is to support and work with community partners who are delivering nutrition education and physical activities.

The hospital’s current focus is on working to identify best practices among obesity prevention programs – both hospital-based and in the community – to ensure that its programs are optimally effective in encouraging fitness and nutrition among children and adolescents.

Children’s is internationally recognized for its treatment program to help overweight and obese children. The Optimal Weight for Life (OWL) program is the largest pediatric obesity clinic in New England, currently serving more than 700 children annually (one-fourth of whom are from the city of Boston). The OWL clinic is staffed by a multidisciplinary team that includes physicians, nurse practitioners, dietitians, psychologists, social workers, and exercise physiologists – all working to treat children and adolescents who are overweight or obese and those with Type II diabetes. The focus of the program is on health eating and diet, but also includes individualized meal plans and exercise programs, plus behavior modification and group counseling.

This track record, coupled with a focus on local children at risk and strong community connections, makes Children’s ideally suited to expand efforts to help prevent and treat these problems, which are reaching epidemic proportions.

The consequences of obesity and lack of fitness can have both short-and long term negative impacts – everything from early onset of cardiovascular disease to diabetes. To reverse this trend, Children’s is finding solutions and ways to prevent the problems of obesity on all fronts – through **direct services** such as the OWL program described above and other programs described below, plus research, training, community health, and public policy advocacy.

Obesity-related **research** at Children’s spans a range of issues, including nutrition and food consumption patterns, diabetes and health, school programs, eating disorders, and evaluation of community-based programs.

Clinicians are assisted in remaining current through **training** sessions, “shadowing” programs, and conferences.

Improving school nutrition and physical activity are two fitness-and-nutrition related **advocacy** activities. Two bills have been introduced in the state legislature to address these problems.

In the **community**, *One Step Ahead*, a community-focused treatment and prevention program, serves Boston children ages 3-13 by providing evaluations, counseling, and helps to identify and refer them to other nutritional, educational, and recreational resources. At the Martha Eliot Health Center, the *I'm in Charge* program targets young people ages 9-20 who are overweight and at risk for Type II diabetes and provides them with education, clinical care, and access to other community resources.

In addition, the hospital has provided funding to eight hospital-affiliated community health centers with existing fitness and nutrition programs. This funding program, called "Fitness in the City," is aimed at building community capacity to help reduce childhood obesity; and to help identify the best practices to provide obesity prevention services in the community. In addition, the hospital's contribution to the United Way has enabled Children's to support "scholarships" for Jamaica Plain and Roxbury children to attend *Body by Brandy4Kids*, a Roxbury-based program designed to support physical fitness and healthy living for children at risk for health issues associated with obesity.

In FY06, Children's provided hospital-based obesity treatment to 600 children, and reached more than 500 children and youth in community settings.

Overall Fitness and Nutrition Goal: Reduce the prevalence of childhood obesity for children in Boston.

Fitness in the City

Goals:

- Develop a community-based obesity prevention/treatment model to reduce the prevalence of childhood obesity and overweight problem in Boston through a variety of treatment interventions such as behavioral therapy, reduction in sedentary behavior, and nutrition and physical activity education
- Increase the capacity of Boston health care providers and families to identify and manage overweight and obesity among children by raising awareness of families, communities, and providers around issues of childhood obesity
- Collaborate with community organizations and the Boston Public Schools to reduce barriers and increase opportunities for children and families to access healthy foods and safe, affordable physical activity opportunities, to reduce disparities in childhood obesity outcomes, and enhance advocacy for policy changes

Strategies:

- Enroll children identified as being at risk or are overweight in an intervention program to address obesity
- Measure Body Mass Index (BMI) of all participating children
- Enhance collaboration with community health centers and other community partners and Children's Hospital programs (OWL and OSA)
- Collaborate with Blue Cross Blue Shield, United Way of Massachusetts Bay, Northeastern University Sports Center and UMASS Boston to provide physical activities/interventions for referred children

- Establish data tracking systems at health centers and provide ongoing support and technical assistance
- Train at least 15 providers around issues of childhood obesity
- Adopt standards for the sale of food and beverages in schools through state legislation

Accomplishments:

- All 8 community health centers are measuring BMI
- 118 children enrolled in the case management/nutrition program
- 52 attended Brandy's Gym
- 243 received physical activity interventions
- 2 health centers participated in a day-long shadowing program at OWL
- All 8 centers have established a tracking system
- 15 providers were trained around issues of childhood obesity

I'm iN Charge

Goals:

- Empower youth and their families to “take charge” of weight control by teaching and supporting healthy behaviors, focusing on nutrition and exercise
- Develop the knowledge and capability of pediatric and adolescent medicine primary care physicians to manage high-risk overweight youth in a community-based and culturally appropriate manner
- Challenge community and cultural opinions about healthy behaviors, specifically nutrition and exercise
- Create a model, adapted from the hospital's OWL Program, to meet the needs of the local population, which can be replicated in other health centers in Boston

Strategies:

- Create individualized plans for each participant in the program; provide education to parents/caregivers about how to help support their child to eat right
- Provide culturally-sensitive, developmentally appropriate nutrition education
- Offer individualized nutritional counseling to address specific cultural and familial issues
- Provide an exercise program for participants to help them access physical activity
- Provide ongoing medical consultation to MEHC primary care providers on how to identify and manage high-risk youth
- Establish mechanisms of communication with primary care providers to promote effective and appropriate management of weight
- Initiate community education and workshops to increase community awareness and promote healthy lifestyles
- Advocate for policy changes to remove barriers to adopting healthy behaviors

Accomplishments:

- Served 39 patients for a total of 464 patient visits
- Held four parent education sessions with 30 parents in attendance
- 26 nutrition education groups were held for participants

- Two training sessions were held for primary care providers to enhance the referral process
- Initiated a tracking system for INC participants, which is better integrated within the health center's medical record system
- Developed a progress report for primary care providers to receive updates on participants' progress
- Trained three Adolescent Medicine fellows in how to manage high-risk overweight children
- Participated in two community health fairs, participated in a television program targeting the Latino community, and testified at a State House hearing concerning the ban of soft-drinks in public schools.

One Step Ahead (OSA)

Goals:

- Reduce the number of children in Boston who are overweight or at risk for being overweight by providing multidisciplinary treatment and prevention services
- Establish collaboration with affordable local community exercise programs to connect families to safe and affordable means of exercise
- Expand services to children through community outreach and education
- Establish research partnerships with the Prevention Research Center on Nutrition and Physical Activity in Youth at the Harvard School of Public Health

Strategies:

- Identify children through primary care providers to participate in the program
- Assess each participating child for their eating habits and level of physical activity, as well as family dynamics and home and school environment
- Offer nutritional counseling and promote physical activity
- Provide behavioral support to children and families using a behavioral psychologist
- Collaborate with local fitness centers such as the Roxbury YMCA and Body by Brandy
- Provide individualized outreach to patients and families to assess physical activity interest
- Establish the link between families and physical fitness centers by helping to arrange visits or make phone calls
- Provide educational materials about healthy eating and physical activity

Accomplishments:

- 104 children have participated in the program for a total of 195 patient visits with children and families
- 80 children have been referred to community centers for physical fitness opportunities
- 100 children have been provided with individualized assessments
- 52 percent of the participating children had a decreased BMI, 24 percent maintained their BMI, and 47 percent reported a decrease in television viewing
- 46 parents/caregivers completed a satisfaction survey and all agreed that the program had a positive impact on their child.

Appendix J Advocacy

Expanding Access to Care. Children’s Hospital Boston has been a long-standing leader in improving children’s health insurance and has helped drive the effort to expand children’s coverage. The hospital is a founding member and the primary hospital grantor of the Children’s Health Access Coalition (CHAC), an initiative of Health Care For All. CHAC has had substantial success over the past decade in improving access through coverage expansions and advocating for affordable premiums. Massachusetts now has one of the best child insurance rates in the nation (more than 96 percent of all children have coverage).

Children’s has provided critical resources and support to efforts to ensure that these policy gains are translated into actual coverage, both by enrolling uninsured children on-site and through community partnerships with the Massachusetts Covering Kids and Families Initiative, the Boston Public Health Commission, and other local groups. Children’s continues to think big and work proactively.

Children’s partnered with Community Catalyst, a national consumer advocacy organization, to expand advocacy efforts regionally through the New England Campaign for Children’s Health. This is a coalition of key stakeholders in child health from across New England that seeks to improve access to care and advance health care coverage for children at the state and federal level, as well as to enhance the quality of pediatric care.

Advocacy in Core Commitment Areas. The hospital has comprehensive child health policy advocacy initiatives in the four core commitment areas of asthma, mental health, injury prevention, and fitness and nutrition. Priorities for the 2005-2006 state legislative session included ensuring adequate insurance coverage for asthma education, improving school nutrition standards, requiring that physical education be taught in schools, promoting child passenger safety, and advocating for mental health coverage and quality.

Because of the hospital’s unique vantage point, Children’s expertise is frequently requested by state policy-makers. Hospital staff has provided testimony to oversight committees on mental health, substance abuse, and public health on barriers to community-based mental health services and on child protection issues, highlighting programs for our legislative leaders. Hospital staff regularly consult with, and serve on panels convened by, administrative officials including the Executive Office of Health and Human Services, the Department of Public Health, the Department of Social Services, the Department of Mental Health, and the Attorney General. For example, Children’s has provided significant leadership to the Mental Health Commission for Children, helped to convene clinical stakeholders for the Attorney General’s Safe Schools Initiative, and offered medical support and guidance to DSS’s “Working with Families Right from the Start” initiative.

Training and Partnerships to Improve Child Advocacy Results. The hospital’s government relations professionals work closely with hospital leadership and clinicians to assess and recommend policy initiatives that will benefit children and oppose those that will have a negative

impact. With proper support and training, medical and public health experts from the hospital provide their expertise on children's issues at hearings and in meetings with legislators at the state and federal level. Twenty-five experts have testified at hearings and/or advised policymakers in meetings on key child health access and community health priority issues.

As part of its mission to be the leading pediatric training program for the next generation of physicians, the hospital also has developed a program to help residents in pediatric medicine gain advocacy experience and make a positive impact in the community. The Advocacy Clinic Training (ACT) program, under the direction of resident leaders, gives pediatric medicine residents the opportunity to meet with legislators, conduct home visits for children with special health needs, and volunteer in community-based organizations. Residents gain valuable insight into their patients' lives that cannot always be ascertained from a patient visit, and draw on this experience to inform legislators.

Children's also leverages the important voice of families, hospital staff, and community partners in its advocacy efforts through the 1,300 member Children's Advocacy Network (CAN). In 2006, Children's developed a program to give 35 CAN advocates a chance to deepen their commitment to advocacy by participating in a special training series to become more effective advocates. The training provided them with the knowledge and skills needed to participate more fully in the policy-making process. Other hospital initiatives included engaging 15 medical residents in legislative advocacy through meetings with their legislators or staff to discuss issues ranging from school wellness to breastfeeding, from access to asthma education to access to care; and supporting the participation of seven families in Family Advocacy Day in Washington, DC, where they met with their members of Congress to advocate for continued and expanded Medicaid coverage and funding to train pediatric specialists.

Children's strongly believes there is strength in numbers, and maintains partnerships with many children's health-related coalitions, including the Boston Urban Asthma Coalition, the Boston Public Health Commission's Mental Health Policy Advocacy Coalition, the Seatbelts Are For Everyone (SAFE) Coalition, and the Massachusetts Coalition on Obesity Prevention and Education (COPE). The hospital is committed to enhancing the work of these coalitions by providing leadership, technical assistance, and financial support. The coalitions have advocated successfully for a range of important child health initiatives, such as substantial expansion of and full funding for child health and pre-natal care programs. These partnerships also have led to important collaborations in the development of resource materials, such as the "Guide to Children's Mental Health Services" for parents.

Appendix K

Supporting Essential Community Partners

Partnerships are a key element in attaining the vision of “Healthy Children. Healthy Communities.” A task beyond the reach of any one organization – despite its level of commitment – achieving this goal requires a concerted and sophisticated effort to integrate and coordinate care. It truly “takes a village to raise a *healthy* child.”

In addition to its own efforts toward the goal, Children’s Hospital Boston actively helps build and support the efforts of the “village” that is steward of the health of Boston’s children, on three levels:

- partnering with community health centers, the Boston Public Schools, government agencies, and community-based organizations to address the core commitment areas of asthma, mental health, injury prevention, and fitness and nutrition as well as partnering with community programs aimed at improving child health more broadly
- helping to shore up and support the infrastructure for the delivery of health and social services to children and families throughout Boston
- acknowledging and acting on the hospital’s civic role and responsibilities, including support of local organizations that help make Boston a vibrant place to live and work.

In these relationships, the hospital seeks to leverage its unique vantage point as the Commonwealth’s only solely pediatric hospital to “advocate” for the health and well-being of children, and brings a purposeful, child-focused, family-centered, and culturally sensitive point of view to its support of the efforts of community health partners.

The following provides more specific examples of the hospital’s many partnerships.

Partnerships Aimed at Improving Child Health.

*For a more complete description of the hospital’s relationships with **community health centers**, see Appendix E.*

*For a more complete description of the hospital’s relationship with the **Boston Public Schools**, see Appendix L.*

Boston Public Health Commission

Children’s has been an active and financially supportive partner in the Boston Public Health Commission’s (BPHC) initiatives with children, adolescents, and young adults, working together on the most pressing public health issues for city children.

- *Boston STEPS Initiative.* Children’s is an active participant in both the planning and implementation of the Boston STEPS Initiative. The Executive Director of the Martha Eliot Health Center chairs the Health Care Systems Committee for STEPS, which is focused on coordinating efforts among health centers, schools, and other community groups addressing asthma, diabetes, and nutrition/obesity. MEHC also is one of the STEPS sites implementing

the *I'm iN Charge* program, which targets Latino and African American at risk youth for diabetes.

- The *Asthma Health Project*. Children's partners with BPHC in funding, planning, and implementing the Asthma Health Project, which includes the Boston Asthma Games, Boston Asthma Swim, and Boston Asthma Summer Program. In addition, the Children's Asthma Initiative has worked closely with BPHC around planning for services and seeking funding to improve the environment and health of children and families living with asthma in Boston and in Boston Public Housing.
- *Substance Abuse*. Staff from Children's is planning and implementing training for BPHC staff around issues of adolescent substance abuse screening, assessment, intervention, and treatment.

Supporting the Infrastructure for Health and Social Services.

*For a more complete description of the hospital's relationships with **Community Health Centers**, see Appendix E.*

*For more complete description of the hospital's relationship with the **Boston Public Schools**, see Appendix L.*

Mayor's Office and Child Health. City government partnerships include co-sponsorship with the Mayor's Office on the Mayor's Award for Excellence in Health, which is given each year to a Boston-based program that effectively promotes the development of healthy children.

Financial support to community programs. In addition to partnerships with city government, community health centers and schools, the hospital provides financial and in-kind contributions to more than 75 local organizations to build community capacity toward improved child health. The hospital is able to seed innovative, community-based programs through its Community Child Health Fund (CCHF) and a partnership with the local Community Health Network Area (CHNA). Through these two initiatives, the hospital supports community-based organizations and schools that improve the health and well being of children and families and their projects such as anti-violence initiatives, nutrition education and physical activity, asthma management, and substance abuse.

The Community Child Health Fund (CCHF) provides seed funding for innovative projects designed to meet the health needs of children in the Boston neighborhoods of Allston/Brighton, Dorchester, Mission Hill, Mattapan, Roxbury, Jamaica Plain, and the South End. Applicants for these funds must show how their project will provide a culturally responsive way to address the core health issues of asthma, mental health, injury prevention, fitness/nutrition, and access to care. CCHF provides a total of \$50,000 annually for projects, based at the hospital, in community health centers, schools, or in community based organizations. CCHF has distributed 66 grants since 2000, for a total of approximately \$370,000.

The following is a list of organizations funded in 2006. A complete listing of grant recipients since 2000 appears in Appendix N.

| Organization | Project Title | Year Funded | Category |
|-------------------------------|-------------------------------|--------------------|-------------------|
| Boston Arts Academy | CHNP | 2006 | Mental Health |
| Healthworks Foundation | Young Women on the Move | 2006 | Fitness/Nutrition |
| Inquilinos Boricuas en Accion | Rhythmic Reflectionz | 2006 | Injury Prevention |
| Sociedad Latina | Unique Rhythm | 2006 | Fitness/Nutrition |
| Child Care Choices of Boston | Muevanse Todos | 2006 | Fitness/Nutrition |
| Hyde Square Task Force | WEPA | 2006 | Fitness/Nutrition |
| Neponset Health Center | Vung Do, Vung Vang, Vung Xanh | 2006 | Mental Health |
| New England SCORES | Kick, Run, Have Fun | 2006 | Fitness/Nutrition |

Civic Responsibilities

Every institution, whether large or small, private or not-for-profit, has a responsibility to be involved in its community. As one of the state’s largest not-for-profit employers, Children’s is dedicated to being a “good neighbor” to local, surrounding communities as well as in helping to ensure that Boston remains strong. At the same time, Children’s is the only free-standing children’s hospital in the state with a mission to improve the health of children. Thus, through civic engagement, the hospital tries to merge its role as a large employer with its mission to improve the lives of children.

That means the hospital must make vibrant the city where children and families reside. As discussed earlier, the hospital helps support the infrastructure for the delivery of health and social services to children and families throughout Boston. At the same time, it seeks to assure that low- and middle-income families can remain a part of the city – that they have stable employment, career development opportunities, and affordable housing in livable, family-friendly neighborhoods.

The hospital is active in a number of organizations that improve the City of Boston. The hospital’s Chief Executive Officer is a member of the Board of the Greater Boston Chamber of Commerce, and the hospital participates in many of the Chamber’s events and forums each year. The hospital also is a proud sponsor of Mass Inc., encouraging thoughtful dialogue and research related to civic life. The hospital’s Chief Operating Officer is a member of the board of the Massachusetts Taxpayers Foundation, the Medical Area Service Corporation (MASCO), and the Artery Business Committee. Other senior staff members represent the hospital with the state’s Catastrophic Health Care Committee and the Boston Plan for Excellence, including its “Principal for a Day” program.

Appendix L

Support for and Partnerships with Boston Public Schools

Recognizing that schools have an enormous role in the everyday lives of children and their families, Children’s Hospital Boston considers the Boston Public Schools (BPS) to be key partners in implementing its community health strategy. Through direct services, Children’s reaches an estimated 3,700 children and 650 parents, as well as 1,500 teachers and staff. In addition to providing services, the hospital provides funding to support the BPS infrastructure. This BPS partnership is focused on providing support in four key areas:

- bringing health services and programs to schools
- supporting school nurses
- strengthening the health infrastructure in the BPS
- encouraging students to learn about health care careers.

School services and programs. These are focused on access to health care and mental health services, improving student school functioning, and educating students and school staff on asthma management and injury prevention. They include:

- The *Children’s Hospital Neighborhood Partnerships (CHNP)*, which provides school-based mental health services in 18 schools, reaching an estimated 3,447 children and 366 parents
- The *ASK Program (Advocating Success for Kids)*, which provides educational and developmental assessments for children and case management for families; the program provided 124 consultations to new children and 362 follow-up consultations to children, primarily in the Boston Public Schools.
- At the *Gardner School* in Allston/Brighton, Children’s provides a pediatrician one day a week to provide general pediatric care including physicals, treatment of minor health problems, and health education for students and staff.

School nurses. In FY06, Children’s provided 125 scholarships to BPS nurses for professional development training courses. Sample classes included: Common Childhood Conditions in Primary Care and ADHD and Autism, the Annual Pediatric Asthma and Allergy Update, Children and Adolescents Optimizing their Diabetes Care, and Responding to the Needs of Victims of Dating, Domestic, and Family Violence.

School health infrastructure. In 2006, Children’s built on the foundation of its long-standing collaboration with the BPS and the City of Boston on the “Countdown to Kindergarten” initiative by making a significant financial contribution to the city’s broader efforts to reach children aged birth-to-five and their families. The hospital increased its annual support of Countdown, provided a paid part-time staff person to the city for six months to conduct research on this subject, and funded two years of a new, free play group for Boston parents and their young children at the West Zone Early Learning Center.

Health careers. Children’s recognizes that one of the best ways to enrich and diversify its workforce is to recruit, train, and promote Boston residents. One of the hospital’s strategies in this effort is to provide summer jobs and other internship opportunities to BPS high school

students. This provides students with employment opportunities, but more importantly, gives them exposure that may inspire them to pursue health careers. Children's participates in the following programs that benefit students:

- *Summer jobs for BPS students.* During the summer of 2006, for the fifth year in a row, Children's participated in various programs including the Summer Jobs Campaign, led by Mayor Thomas Menino and the Private Industry Council (PIC), to provide BPS youth with employment opportunities. In FY06, the hospital placed 36 students, including 20 from the PIC, 13 from Parker Hill/Fenway ABCD, and three from Mission Safe.
- *The Student Career Opportunity Outreach Program (SCOOP),* developed by hospital nurses, educates, informs, and offers nursing career options to students. SCOOP inspires high school students to enter nursing through direct nurse-to-student education and career advice. In FY06, 20 students participated in the program.
- *Health Education and Career Network Expo.* The hospital reached approximately 300 local students through participating in the Health Education and Career Network Expo in Roxbury, periodic job shadowing, and career exploration events.

Appendix M
2006 Children’s Hospital Boston Community Advisory Board Members

| | |
|---|--|
| Laurie Cammisa, Esq. V.P for Child Advocacy Children’s Hospital Boston | Elsa Meuse, RN School Nurse Gardner Elementary School |
| Kathy Cook, N.P. Nurse Practitioner Bowdoin Street Health Center | David Mooney, M.D. Director, Trauma Program Children’s Hospital Boston |
| The Honorable Kevin Fitzgerald Sergeant at Arms The State House | Will Morales Executive Director Youth Enrichment Services |
| Linda Grant, M.D. Medical Director Boston Public Schools | Margaret Noce Coordinator JPC: Tree of Life |
| Dorothy James Parent, CHB Patients | Judy Palfrey, M.D. Chief, General Pediatrics Children’s Hospital Boston |
| Robert Lewis Director Boston Centers for Youth and Families | Sonia Pinnock, MSW Social Worker Martha Eliot Health Center |
| Claudio Martinez Executive Director Hyde Square Task Force | Laurie Sherman Mayoral Advisor for Education, Health and Human Services Office of Mayor Thomas Menino Parent, CHB Patients |
| Roger Swartz, MPH Bureau Director, Community Health Initiatives Boston Public Health Commission | Roland Tang, M.D. Pediatrician South Cove Community Health Center |

**Appendix N
Community Child Health Fund**

The Community Child Health Fund (CCHF) at Children’s Hospital Boston provides seed funding for innovative projects designed to meet the health needs of children in the Boston neighborhoods of Allston/Brighton, Dorchester, Mission Hill, Mattapan, Roxbury, Jamaica Plain, and the South End. Applicants for these funds must show how their project will provide a culturally responsive way to address the core health issues of asthma, mental health, injury prevention, fitness/nutrition, and access to care. CCHF provides a total of \$50,000 annually for projects, based at the hospital, in community health centers, schools, or in community based organizations. CCHF has distributed 66 grants since 2000, for a total of approximately \$370,000. A complete listing of grant recipients follows.

| Organization | Project Title | Year Funded | Category |
|---|--|--------------------|-------------------|
| Boston Arts Academy | CHNP | 2006 | Mental Health |
| Healthworks Foundation | Young Women on the Move | 2006 | Fitness/Nutrition |
| Inquilinos Boricuas en Accion | Rhythmic Reflectionz | 2006 | Injury Prevention |
| Sociedad Latina | Unique Rhythm | 2006 | Fitness/Nutrition |
| Child Care Choices of Boston | Muevanse Todos | 2006 | Fitness/Nutrition |
| Hyde Square Task Force | WEPA | 2006 | Fitness/Nutrition |
| Neponset Health Center | Vung Do, Vung Vang, Vung Xanh | 2006 | Mental Health |
| New England SCORES | Kick, Run, Have Fun | 2006 | Fitness/Nutrition |
| Arts in Progress | Circles of Girls | 2005 | Mental Health |
| Children’s Hospital Neighborhood Partnerships | Violence Reduction through Group Therapy | 2005 | Mental Health |
| Crittenden House | Fit@Crit | 2005 | Fitness/Nutrition |
| Hyde Square Task Force | Women Engaged in Physical Activity | 2005 | Fitness/Nutrition |
| Children’s Hospital Primary Care Center | Young Fathers Group | 2005 | Mental Health |
| Adolescent Substance Abuse Program | Group Therapy | 2005 | Mental Health |
| Children’s Hospital Primary Care Center | Rowing Strong Rowing Together | 2005 | Fitness/Nutrition |
| Fenway High School | Adolescent Health Collaboration | 2005 | Mental Health |
| New England SCORES | Kick Run Have Fun | 2005 | Fitness/Nutrition |
| Neponset Health Center | Vung Do Vung Vang, Vung Khan | 2005 | Asthma |
| Wang YMCA | Girls Crew Program | 2004 | Fitness/Nutrition |

| | | | |
|--|--|------|-------------------|
| Boston Chinatown Neighborhood Center | Asthma Swim Project | 2004 | Asthma |
| Wediko Children's Services | Dever Elementary School Collaboration | 2004 | Mental Health |
| Martha Eliot Health Center | We Got Next! | 2004 | Fitness/Nutrition |
| Children's Hospital Neighborhood Partnerships | Parent Input, Education, and Support | 2004 | Mental Health |
| Gardner Extended Services School | Physical Recreation and Nutrition | 2004 | Fitness/Nutrition |
| Hyde Square Task Force | Women Engaged in Physical Activity | 2004 | Fitness/Nutrition |
| Urban Improv | Jamaica Plain Youth Anti-Violence Network | 2004 | Injury Prevention |
| Dorchester House | FANTastic Girls | 2004 | Fitness/Nutrition |
| Children's Hospital Primary Care Center | One Step Ahead | 2004 | Fitness/Nutrition |
| Bridge Over Troubled Waters | Aiding young people to be self-sufficient | 2003 | Mental Health |
| Family Nurturing Center of Massachusetts | Welcome Baby Project | 2003 | Access to Care |
| Jamaica Plain Children's Mental Health Network | Prevention Services in Boston Public Schools | 2003 | Mental Health |
| Jamaica Plain Asthma Environmental Initiative | Asthma Leader Program | 2003 | Asthma |
| YMCA of Greater Boston | Swimming to Success | 2003 | Asthma |
| Children's Hospital Primary Care Center | Children's Hospital Asthma Project | 2003 | Asthma |
| Refugee and Immigrant Assistance | East African Child Abuse Awareness Project | 2003 | Injury Prevention |
| Coalition for Health and Human Services in Jamaica Plain | Nurturing Parent and Youth Support Groups | 2003 | Injury Prevention |
| Boston Public Health Commission | Home Safety for Child Care Providers | 2003 | Injury Prevention |
| Bromley Heath Tenant Management Corporation | Bromley Heath Health and Hygiene Project | 2002 | Access to Care |
| Child Care Resource Project | Health Access Project | 2002 | Access to Care |
| Martha Eliot Health Center | Breaking Down Barriers to Care | 2002 | Access to Care |
| Dimock Community Health Center | Dimock Cares | 2002 | Mental Health |
| Massachusetts Families for Kids | Building a Healthy Community for Youth | 2002 | Mental Health |

| | | | |
|---|--|------|-------------------|
| West Roxbury High School | Healthy Connection | 2002 | Mental Health |
| Dimock Community Health Center | PACE | 2002 | Asthma |
| Children's Hospital Division of Immunology | Environmental Control of Mouse Allergen | 2002 | Asthma |
| Pediatric Health | Asthma Advocacy through Education | 2002 | Asthma |
| Egleston Square YMCA | Youth Basketball League | 2002 | Injury Prevention |
| Whittier Street Health Center | Somali Health Access and Education Project | 2001 | Access to Care |
| Dimock Community Health Center | Easy as ABC | 2001 | Access to Care |
| Children's Hospital Division of Immunology | Environmental Control of Mouse Allergen | 2001 | Asthma |
| Crittenden Hastings House | Asthma Management Program | 2001 | Asthma |
| Codman Square Health Center | Asthma Management Program | 2001 | Asthma |
| Children's Hospital General Pediatrics | Improving the Health of Asthmatic Children | 2001 | Asthma |
| Dorchester Multi Service Center | Vietnamese Youth Initiative | 2001 | Injury Prevention |
| Children's Hospital Department of Neurosurgery | Think First | 2001 | Injury Prevention |
| Joseph Smith Community Center | Mom to Mom/Madre a Madre | 2000 | Access to Care |
| Children's Hospital Interpreter Services | Hola, Bienvenu, Willkommen | 2000 | Access to Care |
| Children's Hospital General Pediatrics | Improving Adolescent Parent Compliance | 2000 | Access to Care |
| Children's Hospital Center for Families | IMPACT | 2000 | Asthma |
| Children's Hospital Young Adult Medicine | Check it Out | 2000 | Asthma |
| Pediatric Health Associates | Healthy Link | 2000 | Asthma |
| Martha Eliot Health Center | Multi Family Asthma Group Intervention | 2000 | Asthma |
| Children's Hospital Department of Ophthalmology | Prevention of Eye Injuries | 2000 | Injury Prevention |

APPENDIX C – ECONOMIC IMPACT STATEMENT

ECONOMIC IMPACT STATEMENT



Children's Hospital Boston

*Economic and Community Benefits Provided by
Children's Hospital Boston
to the City of Boston*

Report

December 2007

Executive Summary

Background

Children's Hospital Boston is one of the largest comprehensive centers for pediatric health care in the United States, and the only hospital in Massachusetts focused on children's health care needs. This 399-bed facility, as of March 2008, offers a comprehensive range of health care services for children. Children's is committed to bringing excellence in patient care, teaching, research and community benefits to the Boston community. Children's is dedicated to being a caring and responsive community partner, opening lines of access to health care for the underserved as well as being a leader in civic and public policy. As a result, for the 17th consecutive year, Children's Hospital Boston has been rated one of the nation's top two hospitals specializing in pediatric care, according to a survey by *U.S. News & World Report*.

In May 2007, Children's Hospital Boston retained the services of Pittsburgh-based research firm Tripp Umbach to provide an in-depth analysis of the business volume, employment, and tax revenue impacts provided by Children's operations to the City of Boston as well as the impact of their community service, utilizing data from 2006, the last year for which a full data set is available. Tripp Umbach is the nation's leading provider of economic impact analysis for teaching hospitals and medical schools, having completed more than 150 similar projects.

Key Findings:

- Children's Hospital Boston generated \$533 million in total business volume impact on the City of Boston in 2006.
- Children's Hospital Boston generated \$27.7 million in direct and indirect city government revenue in 2006.
- In total, Children's Hospital provided \$7.3 million in unreimbursed care of uninsured patients during 2006, and Children's Hospital incurred \$6.2 million in bad debt.
- In 2006 employees at Children's Hospital provided approximately \$1.9 million in charitable contributions and volunteer services to the community.

Introduction

Boston is home to Children's Hospital Boston, one of the world's finest children's hospitals, providing the most advanced levels of pediatric health care. As the only hospital in Massachusetts committed entirely to the health care of children, this facility offers a comprehensive range of health care services. Massachusetts has always been viewed as a pioneering state in developing models to ensure that high quality healthcare is available and provided to everyone; Children's Hospital continues that commitment. Bringing excellence to patient care, teaching and research, Children's is also dedicated to being a caring and responsive community partner, opening lines of access to health care for the underserved as well as being a leader in civic and public policy.

On an annual basis, the operations of Children's Hospital Boston generates \$533 million in economic activity, generates more than \$27.7 million in revenue for the City of Boston, and provides direct and indirect employment for more than 3,950 Boston residents. As a powerful economic engine, Children's Hospital Boston has become a critical component to the success of Boston's future and cannot be taken for granted.

While Children's Hospital Boston is unmatched for quality and range of health care services for children – its roots are clearly grounded in public service to local communities. It is not just a tertiary institution, bringing exceptional health care to a select few; it is a community-based hospital that welcomes every child in need of health care. From the very beginning, Bostonians viewed health care as a right to be provided to all citizens. Paul Revere, who served as the city's first health commissioner, developed a program whereby Boston residents with financial means could purchase healthcare tokens for the underprivileged at the same time that they purchased such tokens for their own families. Currently Children's Hospital provides more than \$7.3 million annually in unreimbursed care of uninsured patients and incurs \$6.2 million in bad debt, narrowing the gap between children with health insurance and those without.

Business Volume Impact

Children's Hospital Boston's total business volume (overall) impact is the sum of direct and indirect impacts. The direct impact stems from the in-city spending of the following principal groups: expenditures for capital improvements, and goods and services; the spending of staff, physicians, residents, and researchers; the spending of out-of-city patients (external to the hospital); and the spending of out-of-city visitors. The indirect impact is derived from these direct, first-round expenditures, which are received as income by businesses and individuals in the city and re-circulated through the economy in successive rounds of re-spending.

City of Boston

- During 2006, Children's had an overall business volume impact on the City of Boston of \$533 million.

Government Revenue Impact

A major misconception is that health systems do not generate government revenue. While Children's Hospital Boston is a not-for-profit institution, the City of Boston still receives substantial revenue as a result of both the direct and indirect influence of this health system. The Tripp Umbach models calculate the indirect revenue benefits accruing to the area based on the business volume generated by the spending of the health system's population. The direct government revenue is the amount paid, or anticipated payment, by the health system entities directly to the government.

City of Boston

- In 2006 more than \$27.7 million in city revenue was generated directly and indirectly by Children's Hospital Boston.

Employment Impact

Children's provides quality, sustainable direct employment to a diverse group of workers who pay taxes to the local government. The economic expansion created by Children's also brings about demand for additional employment in the economy. See Section 7.6 for a full description of the employment impact.

Community Impact

Children's Hospital Boston has shown its commitment to the community by providing health programs and services to local residents. In 2006, the hospital served more than 13,150 children, youth, parents and caregivers in the community through health programs and services. Children's annually conducts health screenings, health fairs, health education workshops, and other health improvement and outreach services. See Section 7.0 for a full description of the hospital's community benefits mission.

In addition to health programs and services, Children's is also responsible for social impacts through their provision of uncompensated care. Uncompensated care is a social good that all community residents enjoy. This care includes unreimbursed care of uninsured patients, as well as healthcare provided to individuals in need for which Children's receives insufficient payment to cover costs. In addition, hospital personnel are among the most generous workers in terms of contributions to local charities and the provision of volunteer services.¹

¹ Tripp Umbach has completed national research regarding the total amount of charitable contributions and value of volunteer services provided locally by health system personnel.

City of Boston

- In 2006, Children's provided \$7.3 million in unreimbursed care of uninsured patients and incurred \$6.2 million in bad debt.
- It is estimated that in 2006, employees, physicians, residents and researchers at Children's provided approximately \$1.9 million in donations and volunteer services to the residents of Boston.

Summary of Economic and Community Impacts

Economic Impacts

Business Volume Impact

Children's direct business volume impact stems from the spending of these principal groups: institutional expenditures for capital improvements, goods and services; the spending of staff, physicians, residents and researchers; the spending of out-of-city patients (external to the hospital); and the spending of out-of-city visitors. In addition, these direct first-round expenditures, received as income by businesses and individuals, re-circulate through the economy in successive rounds of re-spending. The end result is a multiplied economic impact that is a linear result of the health system's presence and their spending patterns. The total business volume or overall impact is the sum of the direct and indirect impacts.

In 2006, Children's Hospital Boston generated a combined total business volume impact on the City of Boston of **\$533 million**.

This business volume impact comprised **\$313.5 million** in direct business volume impact and a further **\$219.5 million** in indirect business volume impacts accruing to the economy through the multiplier.

The direct impact for city business volume was comprised of the following impact components:

a. Direct spending for capital improvements, goods, supplies and services.

This category of impact includes the spending by the health system for improvements to their facilities and capital equipment purchases made with City of Boston contractors and vendors (an average of spending over the previous five years was used). In addition, the category also includes the purchase, from in-area vendors, of goods, services and supplies. These may include a broad range of purchases such as laundry services, food and beverage supplies, drugs, medical disposables, computer consulting, etc.

Total direct spending by Children's for capital improvements, goods, supplies and services equaled **\$158.3 million**.

b. Direct spending by staff, physician, residents and researchers.

While a health system such as Children's spends substantial money on goods and services, one of their biggest benefits to the economy is their direct payroll; most of which goes to Boston residents, who spend the majority of their disposable income in the city. The total payroll from staff, physicians, residents and researchers will generate millions in direct impact through their spending.

Direct spending by employees equaled **\$71 million**.

c. Direct spending, outside of the hospital, by patients from out-of-city.

Spending by patients for medical services is not included in the direct impact. Only the in-city spending by out-of-city patients, outside the hospital, is included.

Direct spending by out-of-city patients, outside the hospital, equaled **\$36.4 million**.

d. Direct spending by out-of-city patient visitors.

As any person working at a hospital can confirm, health systems are substantial visitor destinations. These visitors come to see patients who are friends and family, and when they are from out-of-city they bring with them spending in the Pennsylvania economy for accommodations, gifts, services and other items during their stay.

Direct spending by out-of-city patient visitors equaled **\$37.3 million**.

e. Direct spending by out-of-city visitors to staff, physicians, residents and researchers.

The health system employees attract large numbers of visitors from outside the city.

Direct spending by out-of-city employee visitors equaled **\$10.5 million**.

Additional Business Impacts

In addition to the annual, recurring impacts of the spending categories outlined above, businesses in the city invest millions to support the business volume generated by Children's. The Tripp Umbach impact models calculate the two principal components of business investments: business real property development and business inventories committed to Children's-related business.

Total impacts for business investments equaled **\$145 million**. Components of business investments equal **\$78.9 million** in real property development and **\$66.1 million** in business inventory.

Government Revenue Impact

A major misconception held by business leaders, elected officials, and the general public, is that health systems do not generate government revenue. While Children's Hospital is a not-for-profit hospital, the City of Boston still receives substantial revenue as a result of the direct and indirect influence of the hospital's operations. In 2006, **\$27.7 million** in total City revenue was generated directly and indirectly by Children's. The Tripp Umbach models calculate the indirect revenue benefits accruing to the city based on the business volume generated by the spending of Children's populations. The direct government revenue is the amount paid by Children's departments directly to the government (includes property taxes and voluntary annual payments).

The indirect tax revenue² generated for the City equaled **\$26.2 million** and the direct tax revenue equaled **\$1.5 million**.

Employment Impact

Perhaps the benefit that comes closest to home is the sheer number of Boston's citizens who depend on healthcare, either directly or indirectly, for their jobs and livelihoods. While direct employment numbers are substantial, the actual extent of the employment impact on the city stemming from Children's is considerably larger. Approximately **3,950 total jobs** in the City of Boston in 2006, **2,468 directly** and **1,482 indirectly**, were attributable to Children's.

Children's provides quality, sustainable direct employment to a diverse group of workers who pay taxes to the local government. The economic expansion created by Children's also brings about demand for additional employment throughout in the economy. In addition to the direct employment created, the business volume generated creates indirect employment in a broad range of sectors throughout the economy. Indirect employment,

² Indirect tax revenue is the sum of city taxes paid by Children's-related businesses and populations. Indirect taxes calculate the relationship between Children's-related business volume, the business volume calculated for the overall city based on sales receipts and the overall amount of tax collected by the city as tax revenue.

or the employment multiplier, is proportionate to the product and service needs of Children's and their related populations (employees). The sum of direct and indirect employment equals total employment (FTEs).

Community Impacts

In addition to numerous community benefits, health programs and services (described in detail in Chapter 7.0 of the IMP), Children's is also responsible for social impacts through their provision of unreimbursed care of uninsured patients. In 2006, Children's provided \$7.3 million in pure unreimbursed care of uninsured patients to the people in the community and incurred \$6.2 million in bad debt. Uncompensated care is a social good that all community residents enjoy. This care includes pure unreimbursed care of uninsured patients which is a social good given to the community's underserved population as well as health care provided to individuals in need for which Children's receives insufficient payment to cover costs.

Children's Hospital employees are also dedicated to the cause of helping others. In 2006, employees, physicians, residents and researchers at Children's provided approximately \$1.9 million in donations and volunteer services to the residents of Boston.

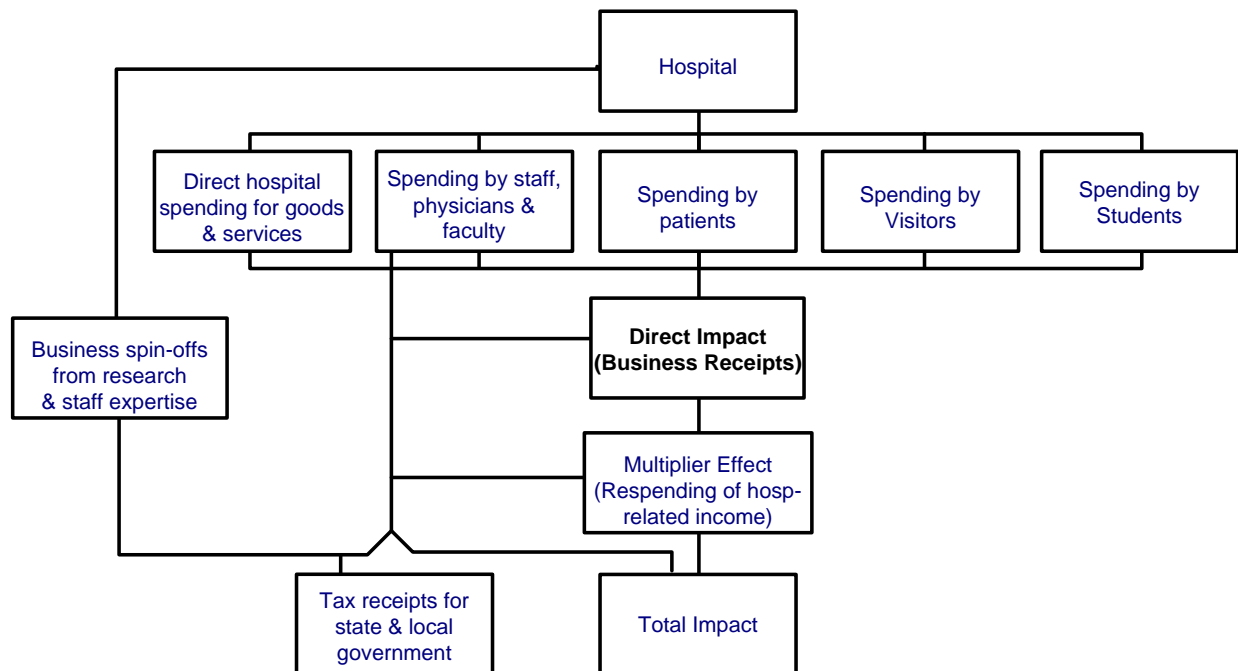
Appendix A: Glossary of Terms

| | |
|---|---|
| TOTAL BUSINESS VOLUME IMPACT OF CHILDREN'S | <p>The total business volume impact of an institution is the sum of the direct business volume impact and the indirect business volume impact (generated in the economy as a result of the direct business volume). Direct business volume is calculated based on institutional spending, employee spending, and spending by out-of-city visitors to the institution. Indirect business volume impact, also known as the multiplier effect, includes the re-spending of dollars within the local economy.</p> |
| TOTAL CITY BUSINESS VOLUME | <p>Total sales receipts generated within a given geographic area (City of Boston). Business volume includes wholesale, retail, service sector spending as well as value added in the manufacturing process.</p> |
| MULTIPLIER EFFECT | <p>The multiplier effect is the additional business volume impact created as a result of the institution's direct business volume impact. Local companies that provide goods and services to an institution increase their purchasing, creating a multiplier.</p> |
| INDIRECT TAX PAYMENTS | <p>Government revenue that is collected by governmental units in addition to those paid direct by an institution, including taxes paid directly by employees of the institution, visitors to the institution, and vendors who sell products to the institution.</p> |
| DIRECT EMPLOYMENT | <p>Total employees based on full-time equivalents (FTEs).</p> |
| INDIRECT EMPLOYMENT | <p>Indirect employment is the additional jobs created as a result of the institution's economic impact. Local companies that provide goods and services to an institution increase their number of employees as purchasing increases, creating an employment multiplier.</p> |

Appendix B: Methodology Employed in the Economic Impact Study

The methodology employed in the economic impact section of this report was derived from an original set of research tools and techniques developed for the American Council on Education (ACE).³ The ACE-based methodology employs linear cash flow modeling to track the flow of institution-originated funds through a delineated spatial area. (see Diagram below)

Hospital Economic Impact (A Traditional Model)



³ Caffrey, John and Isaacs, Herbert, "Estimating the Impact of a College or University on the Local Economy," American Council on Education, 1971.

The "traditional" model of hospital economic impact provides a good measure of the impact of hospital expenditures and their flow within an economy. However, the model does not account for the origination of hospital revenues, and thus counts the spending of revenues received by the hospital from sources within the study area.

Beginning in 1996 Tripp Umbach began a consulting relationship with the Association of American Medical Colleges and completed the first national study showing the economic impact of academic medical centers. For this study, the Tripp Umbach research team felt it important to distinguish the economic impact of the institutions that are attributable to funds brought into the study area from out-of-area sources. The application of this "fresh dollar" model provides a first-line measure of the initial direct expansion in the study area economy caused by the academic health centers. The final model concept evolved into a hybrid model including a fresh-dollar approach feeding into a traditional model which tracks hospital spending within the study area. Thus the final model used for this research measures funds brought into the study area together with the ultimate flow of these funds through the study area's economy and the effect on economic expansion, job growth and enterprise development. The final methodology closely matches the impact study methodology recommended for individual medical schools and teaching hospitals by the Association of American Medical Colleges.