



Maine Medical Center
MaineHealth

INSTITUTIONAL DEVELOPMENT PLAN

Preliminary Draft / January 4, 2017

INSTITUTIONAL DEVELOPMENT PLAN

Preliminary Draft

Purpose

This Institutional Development Plan was prepared by Maine Medical Center (MMC) to comply with the Institutional Overlay Zoning (IOZ) requirements of the City of Portland Code of Ordinances.

Date

Preliminary Draft, January 4, 2017, including pending items to be completed at a future date, following:

- the publication of the final IOZ requirements by the City of Portland, and,
- input from public outreach to be held as part of MMC's planning process.

Term

This document is valid until superseded by an approved update.

Community Engagement Strategy

- Monthly meetings with designated neighborhood representatives;
- At least two public meetings for residents of adjoining neighborhoods
- One-on-one meetings with key stakeholders

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INTRODUCTION

ABOUT MAINE MEDICAL CENTER

Maine Medical Center is a complete health care resource for the people of greater Portland, the entire state of Maine, and northern New England.

Incorporated in 1864, Maine Medical Center is the state's largest medical center, licensed for 637 beds and employing more than 6,000 people. Maine Medical Center's unique role as both a community hospital and a tertiary referral center requires an unparalleled depth and breadth of services, including the state's only medical school, through a partnership with Tufts University School of Medicine, and a world-class biomedical research center, the Maine Medical Center Research Institute.

The MMC care model includes the state's largest multispecialty medical group, Maine Medical Partners. Maine Medical Partners provides a wide range of primary, specialty, and subspecialty care delivered through a network of more than 40 locations throughout greater Portland and Southern Maine.

Maine Medical Center is named one of "America's Best Hospitals" by U.S. News & World Report. MMC's Trauma Center is the busiest in Maine, providing the most advanced tertiary care in the state.

MISSION, VISION AND VALUES

Maine Medical Center is dedicated to maintaining and improving the health of the communities it serves by:

- Caring for our community
- Educating tomorrow's caregivers
- Researching new ways to provide care

We proudly carry our unique responsibility as Maine's leader in patient care, education and research. We are dedicated to the traditions and ideals of not-for-profit healthcare. Our care is available to all who seek it.

Our efforts to execute on our Mission are aimed at achieving a simple, yet powerful Vision: " Working together so our communities are the healthiest in America."

We are guided by our Values, which call on us to meet and exceed the expectations of those we are privileged to serve. Our Values:

- Patient-Centered
- Integrity
- Ownership
- Excellence
- Respect
- Innovation

COMMUNITY BENEFIT

As a nonprofit institution, Maine Medical Center provides more than \$190 million annually in community benefits, delivering care to those who need it, regardless of their ability to pay.

EXISTING PROGRAM + LAND USE

Maine Medical Center has been a Portland landmark and a destination for excellent care since it was built as Maine General Hospital in 1874. The campus has grown in size and complexity within its footprint to meet growing demand and changes in healthcare technology and care delivery.

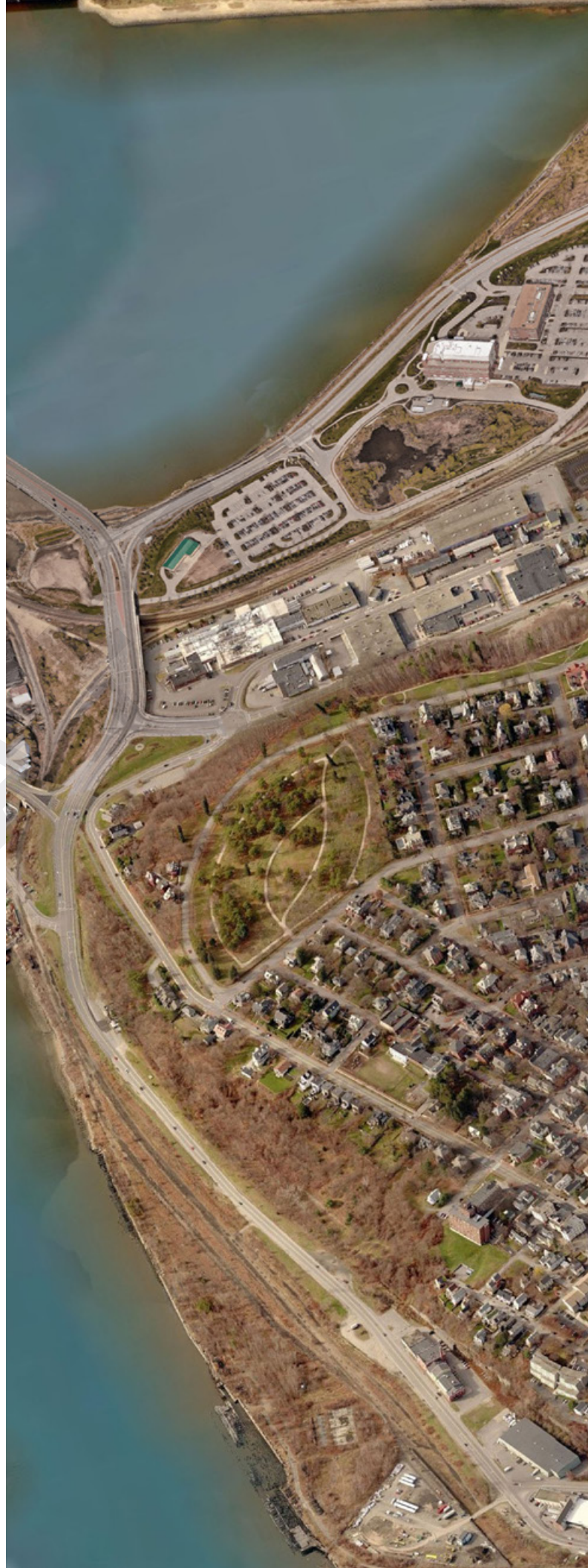


LOCATION AND CONTEXT

The Maine Medical Center Bramhall campus is located at a high point in the west end of the Portland peninsula that is renowned for the Western Promenade—an 18-acre park and national historic landmark designed by the Olmsted Brothers, among others. The campus abuts the Western Promenade in a dense urban setting that serves, in many ways, as a transitional zone between areas with diverse character, land uses, and demographics.

The campus, which serves the entire state of Maine as well as eastern New Hampshire, is located within less than a mile's distance of I-295, which links Portland to destinations across New England. To the north, the campus fronts on Congress Street—Portland's main street that extends along the spine of the peninsula to Portland's downtown and beyond. The MMC campus is located at the western gateway into the City.

Fig.1.1 BIRD'S EYE VIEW OF THE CAMPUS IN ITS URBAN CONTEXT





Neighborhood Context

The 21.8-acre MMC campus abuts four distinct neighborhoods. To the west and north is the St John Valley Neighborhood, a diverse neighborhood featuring a wide mix of uses including single-family residential, multi-family rentals, local and chain restaurants, ethnic groceries, and industrial warehouses. St John Valley, and the largely residential Parkside neighborhood to its east, are among the most ethnically and racially diverse in Portland and include a significant number of refugee residents. (City of Portland GIS Maps, 2010 Diversity Index). The two neighborhoods also share easy access to Hadlock Field, Fitzpatrick Stadium, and Deering Oaks Park north of Park Avenue.

The Western Promenade neighborhood is located to the south of the medical campus. The focal point and namesake of the neighborhood is the 18-acre linear park that wraps the 120-foot tall escarpment, providing sweeping views of Casco Bay and the Fore River. Designated as a park as early as 1836, and designed in 1905 by the Olmsted Brothers, the Western Promenade was also recognized as a national historic site in 1989. The Western Promenade neighborhood and large sections of the adjoining West End neighborhood are included in the West End local historic district in recognition of their cohesive residential character featuring major architectural styles from 1850 to the 1920's.




Zoning Context

Development on the MMC campus has been historically governed by Contract Zone agreements C41 (main campus) and C18 (Congress Street Medical Building).










MMC is currently working with the City and surrounding neighborhoods to establish a new Institutional Overlay Zoning (IOZ) District to regulate future development on campus. MMC's IOZ District will include hospital-owned properties currently zoned C41 and C18. The future IOZ District abuts R4 and R6 Residential Districts on all sides except for the northwestern corner, which abuts B2 Business Community District. As the City implements new institutional zoning for the MMC campus, opportunity exists to comprehensively review the zoning regulations for Congress Street to provide for orderly redevelopment on both sides of the gateway corridor.

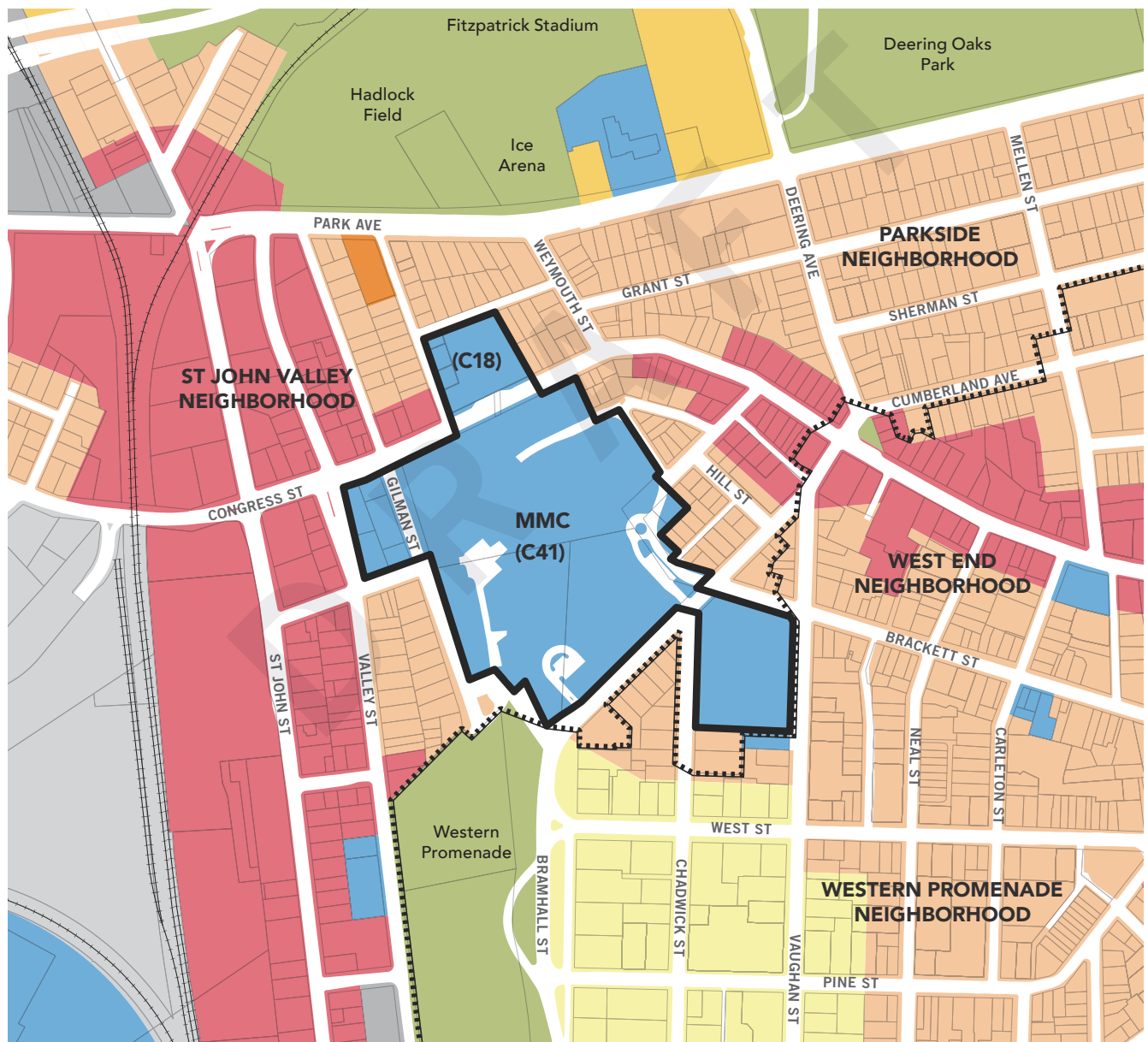
Fig.1.2 MMC CAMPUS: NEIGHBORHOOD AND ZONING CONTEXT (Data Source: City of Portland GIS)

LEGEND

-  Proposed MMC Institutional Overlay Zoning (IOZ) District Boundary
-  West End Historic District Boundary
-  Parcel Boundaries

CITY OF PORTLAND ZONING DISTRICTS

- | | |
|--|--|
|  R4 Residential |  IL Industrial - Low Impact |
|  R5 Residential |  IM or IMb Industrial - Moderate Impact |
|  R6 Residential |  ROS Recreation Open Space |
|  RP Residential Professional |  Contract Zones |
|  B2 or B2b Business Community | |



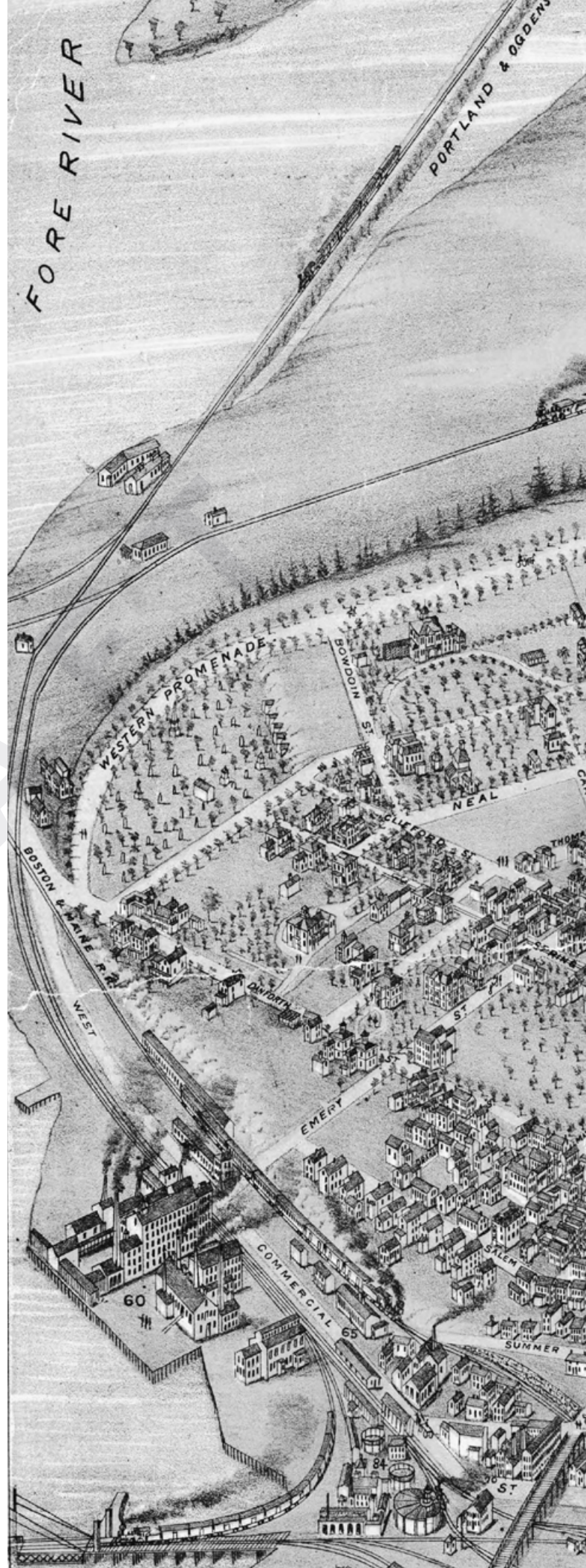
HISTORY

Maine Medical Center opened its doors in 1874 as Maine General Hospital on Bramhall Hill, at the northern end of the tree-lined Western Promenade and adjacent to the Bramhall Reservoir.

The campus, designed by architect Francis Fassett, included four pavilions around a central administration building. The east pavilion and two outbuildings were erected first, providing patients with sweeping views of Casco Bay and the Fore River. The hospital was designated as the training facility for the Portland School for Medical Instruction and the Medical School of Maine at Bowdoin College, and had its own School of Nursing. Built of red-brick in Italian Gothic style, Maine General soon became a local landmark and a destination for the most up-to-date medical care in the state.

The opening of Union Station (1888) down the hill at Congress and St John Streets brought commercial uses to the area, improving access to the hospital. The hospital also catalyzed development of the area with medical uses (such as the 1891 Maine Eye and Ear Infirmary) as well as residential uses. The Western Promenade neighborhood gained prominence at the turn of the century as high-end homes and apartment buildings were built near the hospital and improvements were

Fig.1.3 1876 BIRD'S EYE VIEW OF PORTLAND.





made to the Western Promenade parklands. Maine General Hospital modernized its facilities through the 1920s and added a third pavilion in 1929.

In 1951, Maine General Hospital, the Maine Eye and Ear Infirmary, and Children’s Hospital merged to become Maine Medical Center. Two new pavilions were added in 1956 to provide modern patient rooms. Suburban growth and the construction of interstate highways in the 1960s increased demand for parking at the Medical Center, which was met by converting the Bramhall Reservoir into a surface parking lot (current South Lot).

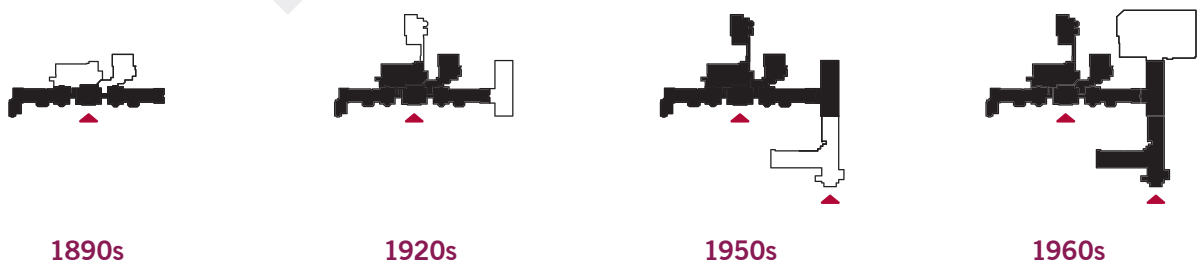
In 1968, MMC doubled the size of its facilities with the addition of the eleven-story Richards Wing. The campus expanded its footprint down towards Congress Street with the addition of its first parking garage (now known as Employee Garage) in the

1970s. In the late 1970s, MMC became a teaching hospital for the University of Vermont College of Medicine.

In 1985, MMC opened the six-story L.L. Bean Building, another major addition to the campus. The Bean Building housed the new Neonatal Intensive Care Unit (NICU), operating suites, and specialty departments; it also now houses the Barbara Bush Children's Hospital (BBCH) today. The Dana Building was built in 1987, adding much-needed classroom and conference space to the campus.

Through the 2000s, MMC has renovated and expanded its facilities to meet its role requirements as the highest acuity provider in the state. In 2008, MMC opened the 190,000 SF East Tower including new units for prenatal care, labor, delivery and recovery, neonatal intensive care, and mother-baby

Fig.1.4 HISTORICAL EVOLUTION OF MAINE MEDICAL CENTER



units. The Emergency Department expanded into the basement of the East Tower the following year. The campus transformation project also included a new central utility plant and the 512-car Patient and Visitor Garage.

As its partnership with the University of Vermont came to a close, MMC initiated a new training program for medical students at the Tufts University School of Medicine in 2011. Today, MMC also hosts students from the Geisel School of Medicine at Dartmouth and University of New England College of Osteopathic Medicine.

In 2014, MMC began construction on a portion of the LL Bean building roof to add new operating rooms and perioperative care beds.

Today, MMC is undertaking a new master plan effort driven by the need to replace semi-private

patient rooms with private rooms and to provide additional surgical capacity. The master plan also provides an opportunity to address infrastructure needs, wayfinding and overall building organization to improve the delivery of care (see Chapter Two for details).

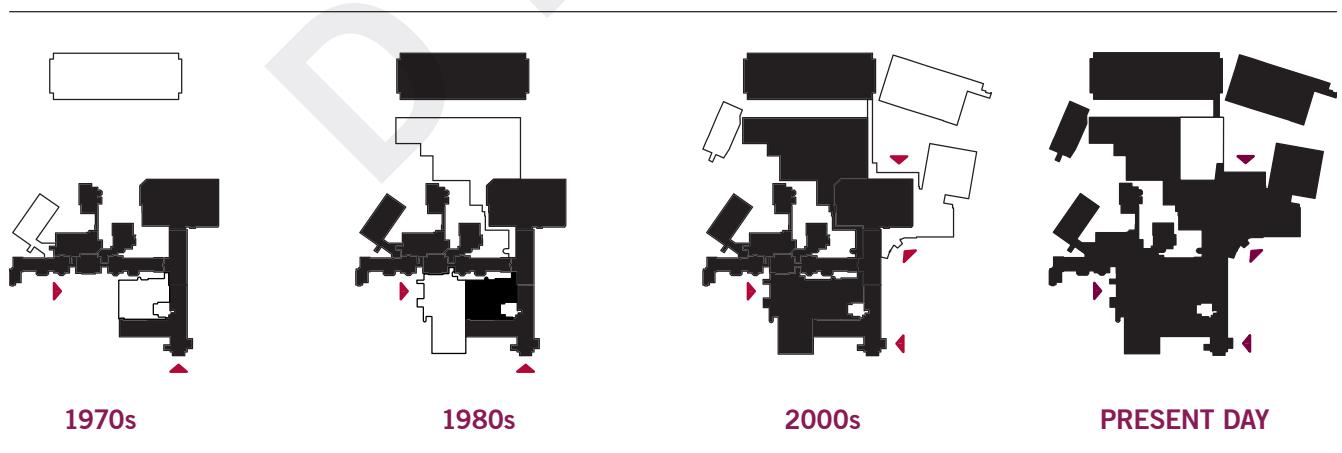




Fig.1.5 BIRD'S EYE VIEW OF THE CAMPUS, LOOKING SOUTH



EXISTING FACILITIES

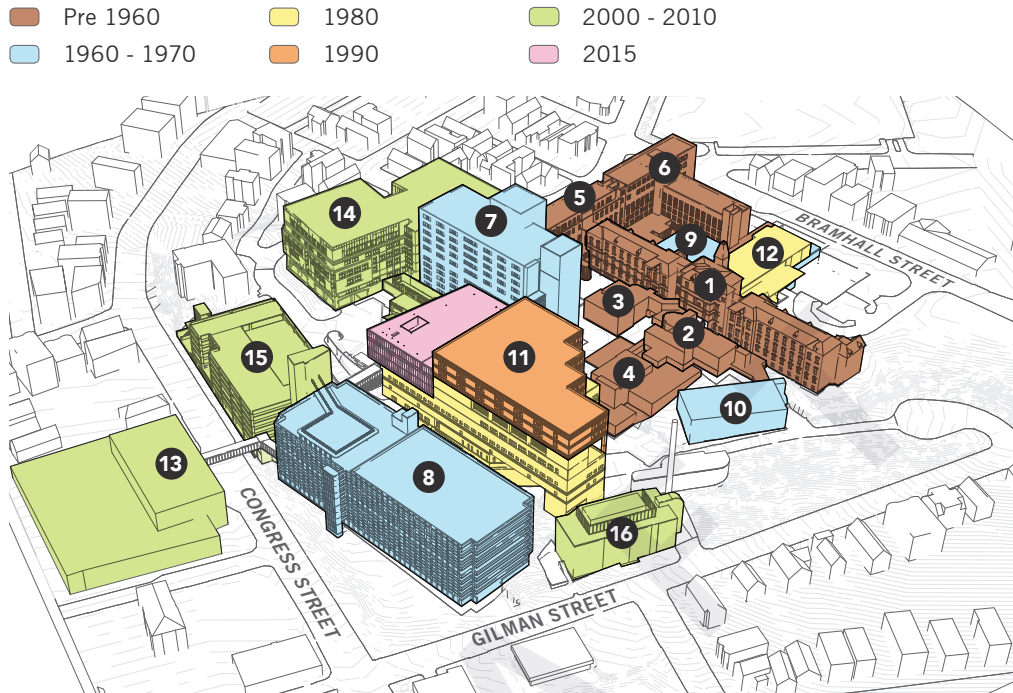
MMC regularly conducts building assessments to inform future investment and development decisions on campus. The assessments evaluate the condition of building structure and systems, and compliance with current building codes and regulations including fire safety. The 2015 assessment (see Fig.1.7 on page 21) illustrates that a number of buildings on campus are approaching the age and level of condition for replacement.

Among those that are listed for replacement in the long-term are the Pavilions, the Richards Building and the LL Bean Building, which together host a large percentage of the hospital's bed inventory. These include a large number of semi-private beds that must be replaced to conform with current patient care standards. The Employee Garage is identified for replacement in the short-term due to its structural challenges.

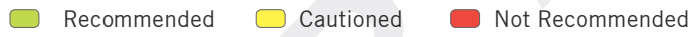
Fig.1.6 INVENTORY OF EXISTING FACILITIES

	Building Name	Date	Gross SF
1	Maine General	1870s	72,920
2	Annex B	1870s	36,250
3	Annex C	1870s	13,190
4	Annex A	1929	10,110
5	Pavilion A	1929	66,380
6	Pavilions C & D	1956	83,460
7	Richards Building	1968	228,920
8	Employee Garage	1970s	--
9	Diagnostics Building	1976	89,150
10	Engineering Services Building	1978	23,840
11	LL Bean Building	1985	231,830
12	Dana Building	1987	19,310
13	Congress Street Medical Building	1999	47,000
14	East Tower	2008	200,000
15	Patient and Visitor Garage	2008	--
16	Central Utility Plant	2008	--
TOTAL			1,122,360 GSF

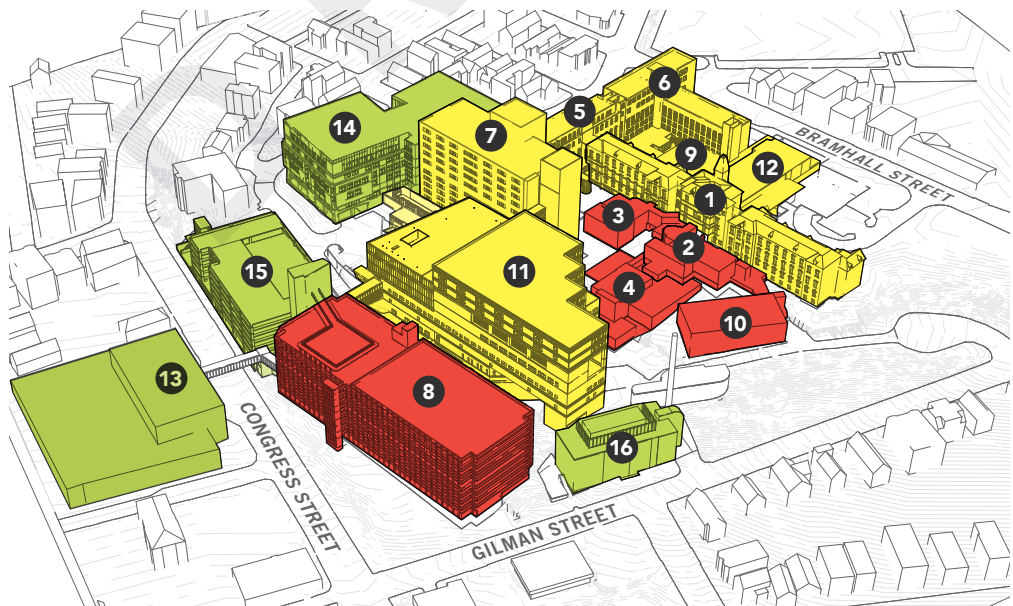
Fig.1.7 EXISTING FACILITIES, BY AGE AND CONDITION



Continued investment in this building is:



For future use.



FUTURE NEEDS + GROWTH PROJECTIONS

As it nears its 150th anniversary, Maine Medical Center continues to improve its facilities and services to fill its role as Maine's leader in patient care, education, and research.



FACTORS AFFECTING HEALTHCARE PLANNING

There are a multitude of factors to consider in healthcare planning that are unique to the industry and some that limit the ability to plan for a far distant future. Due to the unpredictability of many of these factors, healthcare planning beyond three years with relative accuracy is challenging. Therefore, healthcare planning is typically completed in three year increments. For example, the rate of change in healthcare payment and policy often follows federal and state election cycles but can change as often as annually. A summary of factors that affect healthcare planning is included in the table below.

Factor	Definition
POPULATION	<p>Changes in utilization due to population growth:</p> <ul style="list-style-type: none"> — Population increase or decrease — Population aging — Population distribution — Consumer preference
EPIDEMIOLOGY	<p>The underlying causes of disease (divided into two categories):</p> <ul style="list-style-type: none"> — Disease-based: Estimates the incidence and prevalence that are impacted in the long-run by preventative measure (i.e. vaccinations effectiveness) — Behavioral-based: Changes in disease incidence and prevalence due to behavioral and sociocultural factors (i.e. obesity, smoking, diet)
ECONOMICS	<p>Macro-economic factors that affect healthcare utilization:</p> <ul style="list-style-type: none"> — Employment — Healthcare Consumer Price Index — Gross domestic product growth or decline — Employer-based coverage levels — Benefit level and out-of-pocket expense — Regional/Local healthcare environment
PAYMENT & POLICY	<p>Legislative and market-driven reform, including specific payment and policy innovations that will impact utilization:</p> <ul style="list-style-type: none"> — Health insurance coverage expansion — Bundled payment initiatives/pilots — Accountable Care Organizations (ACOs) — Publicly-funded prevention and wellness initiatives
INNOVATION & TECHNOLOGY	<p>Structural technology that shifts the site at which care is delivered or innovations that affect utilization across different care settings:</p> <ul style="list-style-type: none"> — Imaging and diagnostics — New therapeutics — Pharmaceutical advancements — Quality innovations
SYSTEMS OF CARE	<p>Increased efficiency resulting from better care coordination and serve integration across various care sites:</p> <ul style="list-style-type: none"> — Clinical Integration: Use of evidence-based practices and elimination of redundant care — Alignment: Coordination between providers, including inpatient and outpatient providers — Information Technology: Includes computerized physician order entry (CPOE) and e-care
WORKFORCE AVAILABILITY	<p>The healthcare workforce is highly specialized which requires years of training. The availability of qualified individuals can severely limit a healthcare organization's ability to provide care.</p>

MMC FUTURE NEEDS

Introduction

Maine Medical Center (MMC) is a 637 licensed bed Academic Medical Center with an affiliation with Tufts University School of Medicine. MMC is the leading provider of tertiary services in the State of Maine. Tertiary services are defined as a set of Medicare severity diagnosis-related groups (MS-DRGs) that are rare and complex, require collaboration across treatment modalities, complex treatment decisions dependent upon unique diagnostic tests, regionalized care, and associated with complex comorbidities and complications. MMC is the top provider of these services in the state. In 2014, MMC provided 43% of all the tertiary services for the state of Maine.

MMC treats Maine's sickest patients and estimates that the average patient seeking care at MMC will continue to get sicker. MMC's case mix index (CMI) was 1.86 in fiscal year 2015 (October – September); the highest in the state of Maine. A hospital's case mix index is calculated by finding the average severity of diagnosis-related groups at that hospital. The average case mix index for a hospital in the U.S. is 1.31 (CMS.gov). In fiscal year 2016, MMC's CMI grew to over 2.00 and is expected to continue to increase.

Key Drivers for Campus Transformation

MMC's facility needs are multi-factorial but can be summarized into three categories:

1. Immediate Clinical Need
2. Building Need
3. Parking Need

Immediate Clinical Need

MMC has 632 inpatient beds available. On an average day, MMC can expect close to 60 beds to be closed due to patient condition or regular maintenance, and over 500 patients in the hospital, leaving only approximately 20 beds available for new patients. Inpatient beds have specialized purposes that include medical/surgical, intermediate care, intensive care, psychiatric, pediatric, or infant. Therefore, the actual number of beds available for specific populations of patients may be much smaller. In addition to the finite number of beds available, MMC can expect close to 100 admissions per day from Surgery and the Emergency Department, and 5 to 10 transfer requests per day from other hospitals (see Fig.2.1 on page 27).

This reality presents daily challenges for the incredible staff at MMC to meet the needs of patients in the State of Maine. The challenge is expected to grow in complexity as patients get sicker and require highly specialized care.

Building Need

Facilities at MMC date back to the 1870's with the construction of the Maine General Building. Since the early 1900s, MMC has grown to meet the needs of patients. A building assessment was completed by a team of engineers in 2015 that evaluated essential systems in each of the buildings that comprise MMC's campus (see Fig.1.7 on page 21).

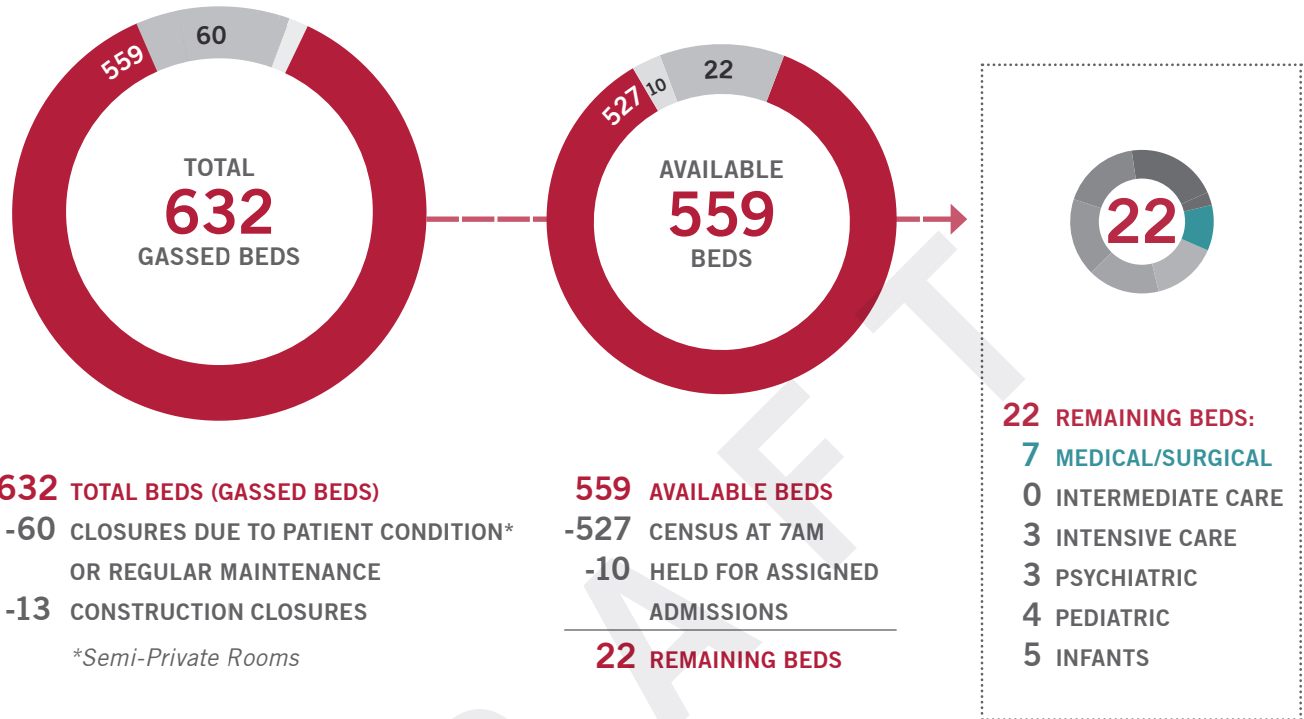
MMC's facilities are increasingly becoming unable to meet the complex needs of patients in the future. Many of MMC's existing patient rooms are shared, which disrupts the treatment and healing of patients and families being cared for in the hospital. The proposed campus transformation plan (see chapter 3) will partially replace rooms and modernize MMC's campus to meet anticipated future need. Proposed patient rooms will be private and can adapt to the level of care needed by patients. They will be "universal rooms" capable of being occupied by a wide spectrum of patient populations from intensive care to recovery from surgery. Procedure rooms will be large enough to fit the equipment and technology needed for the complex procedures that patients increasingly require at MMC.

Parking Need

MMC hosts a wide variety of people on campus every day. Patients, families, staff, and students all require access to the facility. Patients and families from all over northern New England come to MMC for care. These people do not live close enough to take advantage of alternative methods of transportation like buses, cycling, or walking that are provided locally. Clinical and support staff require safe, reliable, and often emergent, access to the facility in order to provide services to patients. Providing parking is a priority at MMC (see Section 4 on page 36 for additional details).

Fig.2.1 A DAY IN THE LIFE OF MAINE MEDICAL CENTER: BED SHORTAGE

Bed Census at 7am (July 28, 2016)



Typical Daily Admissions at 7am

- 5-10 TRANSFERS FROM OTHER HOSPITALS
- 45-50 ADMISSIONS FROM SURGERY
- 45-50 ADMISSIONS FROM EMERGENCY DEPT

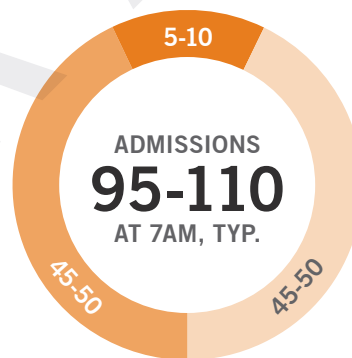
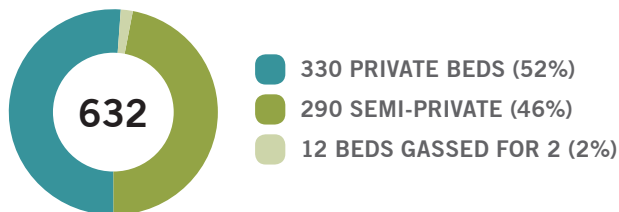


Fig.2.2 EXISTING INVENTORY OF PRIVATE VS SEMI-PRIVATE BEDS



PHYSICAL PLAN

Maine Medical Center is planning a campus transformation campaign to replace aging facilities over the next twenty years, providing for a more efficient and flexible campus that meets the growing demand for more complex and specialized care.



CAMPUS TRANSFORMATION PLAN

A series of projects have been planned throughout the campus to meet current growth needs and to improve the efficiency of care delivery. **These projects are possible options for expansion.**

The bed count will stay the same in the near-term. The Long-Term Plan adds approximately 770,000 GSF to the MMC campus over the next twenty years, and may also provide additional inpatient beds.

DEMOLITIONS

A Employee Garage Demolition

The 2015 building assessment does not recommend continued investment in this structure (see Fig.1.7 on page 21).

D Removal of existing one and two-story structures currently used as office space and for small clinical functions will be required to construct the proposed parking garage.

E Abandonment of service road to enable connection between Congress Street Development (A) and existing facilities.

ADDITIONS / NEW CONSTRUCTION

A Congress Street Development, Phase I (New Construction, 285,000 GSF)

New six-story building along Congress Street on former site of the Employee Garage, plus two-story headhouse to connect to the campus. Building program includes: main hospital drop-off and entrance, universal, private inpatient beds and new operating rooms. The relocation of the main entrance changes the campus's relationship to Congress Street.

B Visitor Garage (Vertical Expansion)

Addition of three floors at top to accommodate 225 new parking spaces.

C East Tower (Vertical Expansion, 60,000 GSF)

Addition of two floors at top to accommodate 64 inpatient beds and relocated heliport.

D Gilman Garage (New Construction)

13-story free-standing garage to accommodate 1135 new parking spaces.

LONG-TERM PLAN

A Congress Street Development, Phases II and III (Vertical Expansion, Approx. 300,000 GSF)

Future vertical expansion to include additional private inpatient beds.

F LL Bean Building, MFP Phase III (Addition, 120,000 GSF)

Expansion of diagnostics and treatment, and interventional platforms. If necessary, existing Laundry Building and Engineering Services Building may be modified or removed to facilitate expansion.

Fig.3.1 CAMPUS TRANSFORMATION PLAN

- EXISTING MMC FACILITIES
- PROPOSED PROJECTS
- LONG-TERM PLAN
- # DEMOLITION
- # ADDITION / NEW CONSTRUCTION (see opposite page for legend and descriptions)

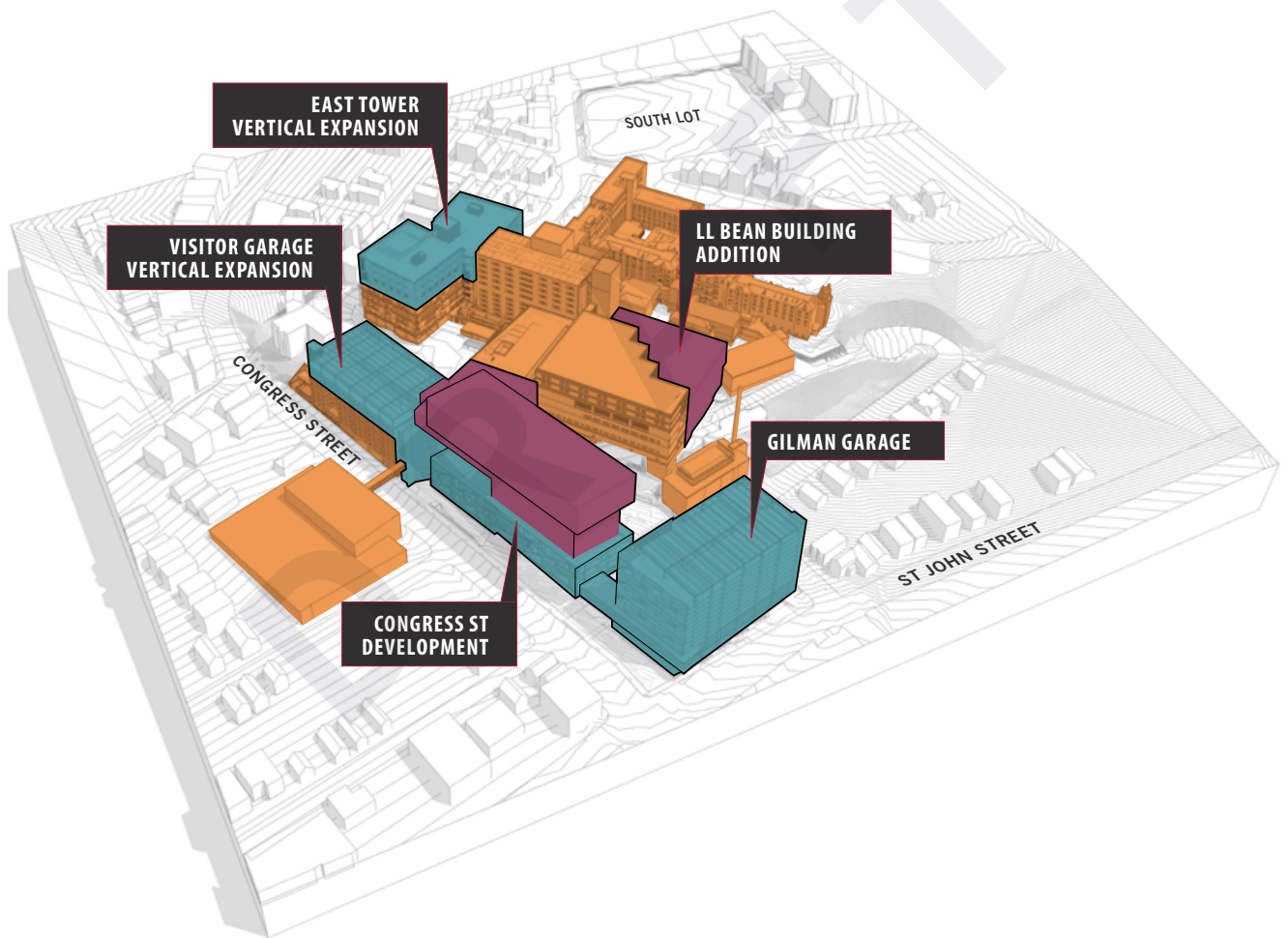


Fig.3.2 CAMPUS TRANSFORMATION PLAN, LONGITUDINAL SECTION ALONG CONGRESS



Fig.3.3 CAMPUS TRANSFORMATION PLAN, AXONOMETRIC VIEW

- EXISTING MMC FACILITIES
- PROPOSED PROJECTS
- LONG-TERM PLAN



LONG-TERM REDEVELOPMENT ZONES

The master plan has identified the following areas as potential areas for redevelopment in the long-term. While no specific use is identified for these parcels currently, they will be preserved as part of the campus to accommodate future growth and transformation needs, if any.

G. Congress Street Medical Office Bldg Site

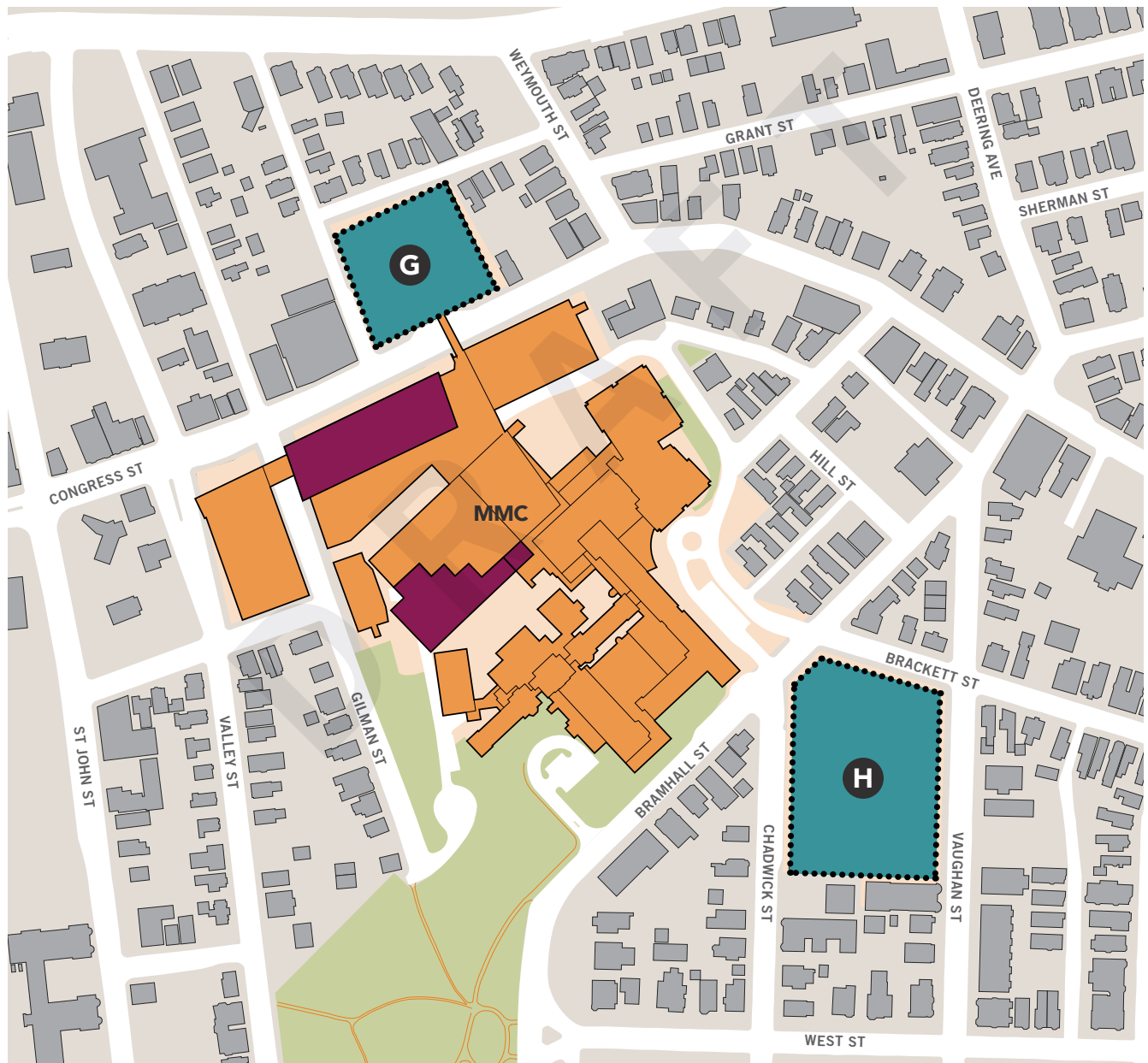
H. South Lot

HOUSING IMPACT

The master plan does not result in the removal of housing units, and as such, is not expected to have a direct impact on housing availability. However, the transformation of the area surrounding the hospital as a result of MMC's development will likely result from increased private investment in the area, including the improvement of and likely addition to housing stock in the area.

Fig.3.4 LONG-TERM REDEVELOPMENT ZONES

- FUTURE CAMPUS
- LONG-TERM PLAN
- LONG-TERM REDEVELOPMENT ZONES



TRANSPORTATION & PARKING

Maine Medical Center is developing a long-term transportation plan that will improve campus access, circulation, and wayfinding for patients and visitors. Ongoing initiatives are aimed at providing alternative transportation options to reduce traffic and parking impacts.



VEHICULAR ACCESS AND CIRCULATION

Patient and Visitor Access

Maine Medical Center draws patients from a large catchment area that extends 250 miles north to the Canadian border and over 100 miles east into New Hampshire. Given the rural composition of both states, a majority of the patients and visitors coming to MMC arrive by car. The campus' proximity to I-295 provides ease of access to most patients and visitors.

Relocation of the Main Entrance

A goal of MMC's campus transformation plan (see Fig.3.1 on page 31) is to make it easier for all to get to, and move around the campus. This involves a scenario planning around different modes of vehicular circulation, and testing each scenario to ensure the safety and arrival experience of pedestrians, bicyclists, and drivers.

Today, most drivers arrive on campus via Congress Street and either park off of Congress Street by entering the Patient / Visitor Garage, or travel up Ellsworth or Bramhall Streets to reach the emergency room or main entrance. The campus transformation plan proposes the relocation of the main entrance and drop-off to Congress Street with the new Congress Street development (see Fig.4.1 on page 39). The main entrance on Congress will be used primarily by vehicles dropping off or picking up patients. The design will allow vehicles to either exit back on Congress Street or enter the Patient / Visitor Garage after passing through the drop-off

zone. The existing main entrance at the East Tower will remain open and continue to serve select uses.

The new main entrance is expected to improve access to the campus while reducing vehicular traffic on neighborhood streets. Work is currently underway to identify design options for the main entrance and drop-off that minimize impact on existing pedestrian, bicycle, transit and vehicular traffic on Congress Street.

MMC's new "Front Door" on Congress will be designed to activate the urban corridor, and to promote a safe and walkable pedestrian environment.

Other Vehicular Flows

Employee vehicular flows will be diverted from Gilman Street to Valley Street following the construction of the new Employee Garage on Gilman, as proposed (see Fig.4.1 on page 39).




Essential service vehicles will continue to use Gilman Street to access the Utility Plant and Engineering and Services Building (see limitations to contractor parking on page 42).

Fig.4.1 TRANSPORTATION PLAN (FUTURE): VEHICULAR AND SERVICE ACCESS, AND PARKING

KEY VEHICULAR CIRCULATION ROUTES

- █ Patients / Visitors
- █ Emergency Drop-off / Ambulance
- █ Staff
- █ Service

PARKING

-  Patients / Visitors (including parking after emergency drop-off)
-  Staff Parking (In map extent only. See list on following page for all locations)
-  Limited Parking for Service Vehicles / Service Staff



PARKING

MMC owns and/or leases structured parking and parking in surface lots for the use of its patients, visitors, employees, and medical students. While MMC's TDM programs (see next page), and changes in societal norms related to car use have been successful in reducing parking demand on campus, parking is expected to be a significant part of the campus' transportation portfolio in the long-term.

The table below lists existing and planned parking inventory for employees and patients in the near-term (see Fig.4.1 on page 39 for locations). Future demand for parking is determined based on workforce and enrollment projections, and GSF of planned clinical growth. TDM measures are

assumed to remain in place to buffer increases in parking demand. Near-term projects planned to improve parking on campus include:

- Replacement of the aging Employee Garage with a new Garage on Congress Street; and,
- Addition of 2-floors to the existing Patient and Visitor Garage.

PARKING TODAY

On campus:

Employee Garage.....	1,274
Patient and Visitor Garage	480
Forest St Garage (887 Congress St).....	400
South Lot	370

Off campus:

First Atlantic Parking Lot (242 St John St) ...	283
Gateway Garage (181 High St)	100
Classic Lot (995 Congress St).....	97
Parking Lot (909 Congress St)	60
Parking Lot (10-16 Bramhall Pl)	26

TOTAL PARKING, TODAY 3,090

PARKING IN 2022

On campus:

Gilman Garage (<i>new</i>).....	1,135
Patient and Visitor Garage (<i>expanded</i>)	705
Forest St Garage (<i>no change</i>).....	400
South Lot (<i>no change</i>).....	370

Off campus:

(<i>No change from existing</i>).....	566
---	-----

TOTAL PARKING, FUTURE 3,176

TDM AND ALTERNATIVE TRANSPORTATION

MMC has a comprehensive Transportation Demand Management (TDM) Plan that has been successfully implemented since its launch in June 2008.

The Plan, which is known to employees as the "Get on Board!" Program, aims to reduce MMC's traffic impact on the peninsula by reducing the number of single occupancy vehicles (SOV) trips to the campus. The goal is advanced through the subsidy, and marketing of alternative commute options including walking, bicycling, transit, and rideshare.

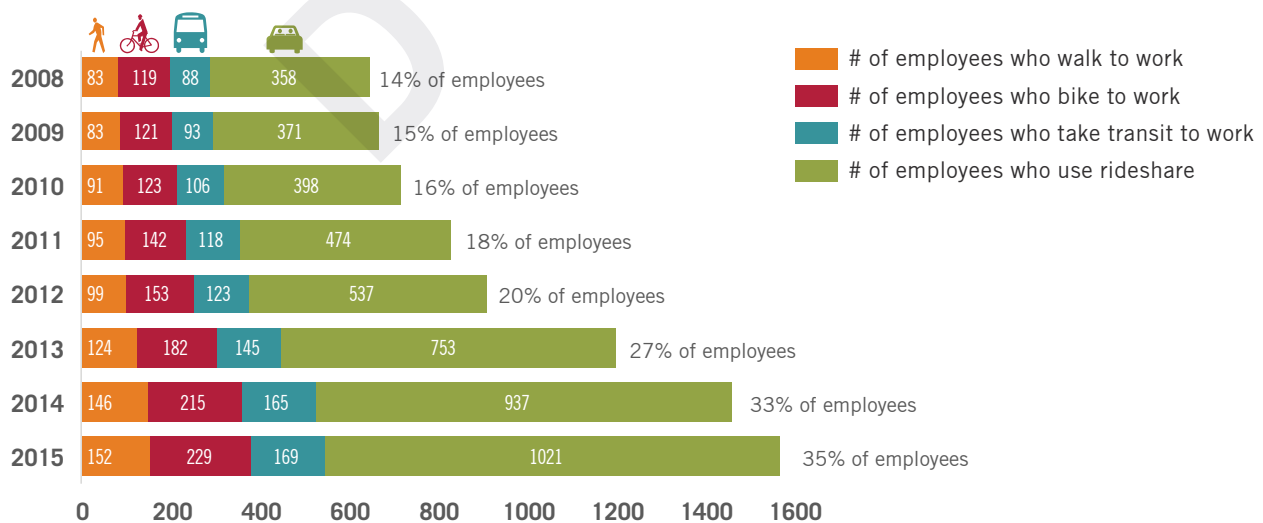
The TDM Plan has continued to thrive and grow, to change and evolve, into an integral part of the fabric and culture of MMC. Its growing success is demonstrated in the growing number of employees who choose alternative modes of transportation. (Fig.4.2 on page 41.)

The "Get On Board" Program is administered through an employee portal that includes information and resources for alternative commutes. The website provides links to Maine Department of Transportation and the Maine Turnpike Authority's "GO MAINE" program to provide employees easy access to additional benefits.

All new employees receive "Get On Board" information at the first day of orientation with instructions on how to join the program. This has increased the number of people that join the program at the start of their employment and has made "Get On Board" a focus of institutional policy.

Individual program elements and related incentives are outlined below.

Fig.4.2 EMPLOYEE PARTICIPATION IN MMC'S "GET ON BOARD!" PROGRAM (2008-2015)



Bicycles

The MMC campus is located in close proximity to existing and planned routes in the City's growing bicycle network (see Fig.4.3 on page 43). MMC has worked diligently to make bicycle commuters feel welcome and safe. In 2008, MMC installed five strategically-located bike racks and ten bike lockers on campus. Three new bicycle racks were added in the vicinity of the Main entrance and in the South Lot last year, bringing storage capacity to 184 bicycles across campus. Bicycle commuters also have access to a shared toolshed with basic tools.

Mass Transit

Employees can purchase discounted bus tickets and Shuttle-Bus Zoom tickets conveniently in the cafeteria. MMC buys the tickets at the regular price and offers them to employees at the reduced prices listed below. This is a clear demonstration of MMC's commitment to making the TDM Plan work for its employees and for the City of Portland (see Fig.4.4 on page 45 for a list of buses within walking distance of the campus).

	REGULAR PRICE	MMC SALE PRICE
METRO	\$13.50	\$8
S. PORTLAND	\$13.50	\$8
ZOOM 10 RIDE	\$39	\$29.60
ZOOM MONTHLY	\$100	\$84.50
ZOOM QUARTERLY	\$260	\$197.50

MMC Shuttles

MMC operates employee shuttle services between the Brighton and Bramhall campuses (M-F, 7am-5pm) and between the 110 Free Street Office Building and the Bramhall campus (M-F, 6am-6pm). Both shuttles run on a fixed time schedule with three round trips per hour. The shuttles provide a predictable alternative to employees commuting between the three sites.

Scooters / Motorcycles

The campus provides a designated parking space for scooters and motorcycles.

Ride Share

Employees participating in the Ride Share program are given access to preferred parking in a gated, ID-card access only area of the Employee Garage that connects directly to the Main Lobby on the ground floor of the hospital.

Contractor Parking

MMC has instituted a shuttle service for contractors from the Classic Parking Lot (993 Congress Street) to the hospital to reduce traffic and parking impact on the campus and surrounding neighborhoods. In 2015, MMC added a 20-space contractor lot on Forest Street. Only essential contractor vehicles are allowed to park on campus: contractor parking passes are distributed by the Engineering Department on a case-by-case basis.

Fig.4.3 PORTLAND BIKEWAY AND PEDESTRIAN NETWORK (Source: City of Portland, 2014)

EXISTING FACILITIES

- Bicycle Lane
- Paved Shoulder
- Neighborhood Byway

- Shared Use Pathway
- Shared Lane, with Marking
- Shared Lane

PLANNED FACILITIES

- - - On Road Bikeway
- - - Neighborhood Byway
- - - Shared Use Pathway or Rail with Trail





The following bus routes are accessible within a five minute walk of the MMC campus. Commuters can transfer to other Metro buses and regional shuttles at the PTC and the Downtown Hub. The PTC also offers access to Amtrak Downeaster line, another commute option.

- M1 – CONGRESS STREET**
Connection to Portland Transportation Center (PTC), Downtown, Munjoy Hill and Eastern Promenade
- M5 – JETPORT / MAINE MALL**
Connection to Downtown, Hannaford Plaza, Maine Mall and Portland Jetport
- M8 – PENINSULA LOOP**
Connection to Downtown, Franklin Towers, Whole Foods Plaza and Hannaford Plaza
- 9A/B – M9A / 9B – NORTH DEERING VIA STEVENS AVENUE**
Connection to MMC Brighton campus, Highlands, Rosemont, and North Deering
- BRZ – METRO BREEZ EXPRESS (BRZ)**
Connection to PTC, Downtown, Falmouth, Yarmouth, Freeport
- ZM – ZOOM Turnpike Express (ZM)**
Connection to Biddeford and Saco

Rte #	Closest Stop	Times of Operation	Headways
M1	Congress Street	5:35am to 11:10pm (M-F) 7:45am to 6:05pm (Sat) 8:10am-6:35pm (Sun)	Varies between every 30 minutes during daytime to every 45 minutes late evenings
M5	St John Street	5:30am to 10:45pm (M-F) 6:05am to 10:45am (Sat) 7:55am to 6:40pm (Sun)	Varies between 25-35 minutes during weekdays (day-time) to every 40-45 minutes on weekend evenings
M8	Bramhall	6:40am to 6:00pm (M-F) 7:50am to 6:17 pm (Sat) 9:35am-4:17pm (Sun)	Varies between every 30-40 minutes during weekdays to every hour during weekends
M9A/9B	Congress	5:35am to 10:35pm (M-F) 7:35am to 10:30pm (Sat) 8:35am-4:35pm (Sun)	Varies between 10 minutes on weekday mornings to every 1 hours on weekends and evenings
BRZ	Congress	6:00am to 7:45pm (M-F) 8:20am to 6:10pm (Sat) No Sunday Service	Varies between 45 minutes on weekday mornings to every 2 hours on Saturdays
ZOOM	Bramhall and Congress	6:00am to 6:40pm (M-F) No Weekend Service	5 buses in the morning b/w 6am-8:17am 6 buses in the afternoon b/w 2:46pm-5:35pm

Fig.4.4 MAP OF EXISTING TRANSIT ROUTES AND STOPS, SHOWN WITH MMC FUTURE CAMPUS PLAN

-  MMC Main Pedestrian Entrance
-  Existing bus stops in the area (see opposite page for transit route legend)



ENVIRONMENT + INFRASTRUCTURE

Sustainable and resilient infrastructure is key to ensure safe and efficient operations of healthcare facilities in the 21st century. MMC is seeking to advance its good stewardship of environmental and infrastructure resources through its campus transformation plan.



NATURAL RESOURCES

The Maine Medical Center Bramhall campus is located at a high point in the west end of the Portland peninsula. There are three locations where natural resources are significant:

- The Western Promenade, a culturally significant public park that is listed in the National Registry of Historic Places (NRHP);
- The area along Bramhall Street abutting the Western Promenade and serving as a foreground to the Maine General Building and original hospital structure; and,
- The undeveloped natural area of the site include of steeply sloped land between the hospital and Gilman Street. This area contains natural vegetation consisting primarily of mature evergreen tree growth which serves as a natural buffer between the hospital and residences on Gilman Street.

SUSTAINABILITY

The solar and wind attributes of the site are strongly considered for future design. In the past, Maine General Hospital had incorporated natural light and ventilation as an important part of the healing process. The master plan is taking advantage of the natural light, heat, and ventilation, which will not only contribute to the healing process and improve the quality of the patient and family spaces, but it will also improve the building's performance.

Fig.5.1 CAMPUS RELATIONSHIP TO THE WESTERN PROMENADE

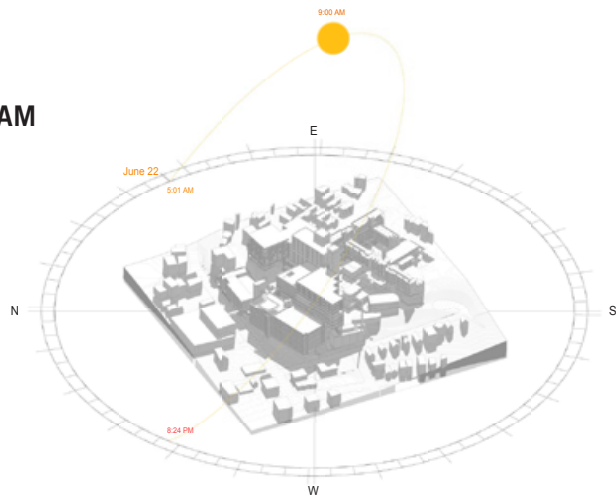


Fig.5.2 FUTURE CAMPUS BUILDINGS SOLAR AND WIND STUDIES

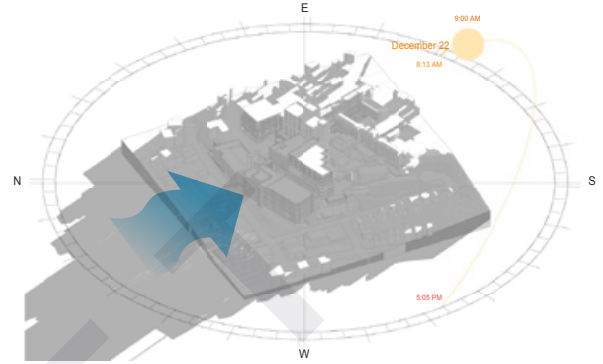
SUMMER SOLSTICE (JUNE 21)

WINTER SOLSTICE (DEC 21)

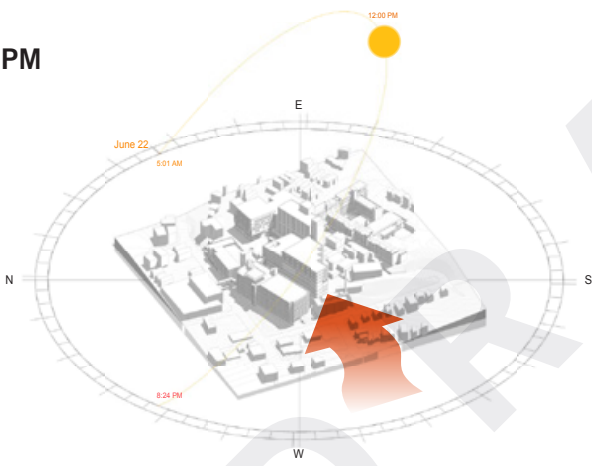
9 AM



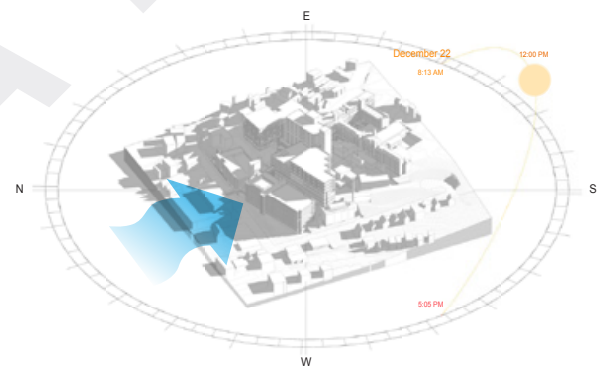
9 AM



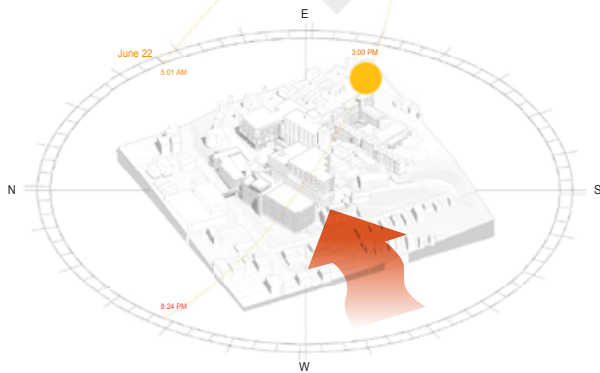
12 PM



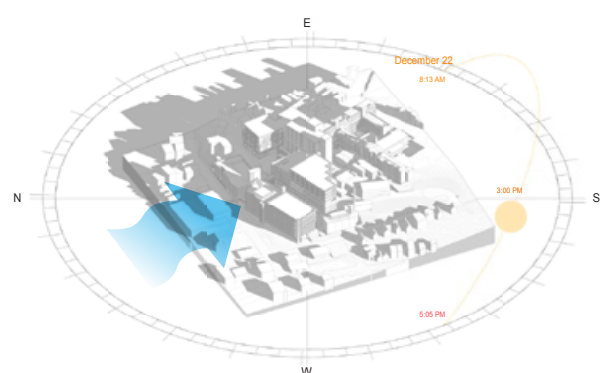
12 PM



3 PM



3 PM



STORMWATER MANAGEMENT

The MMC Bramhall campus is located at a high point in the west end of the Portland peninsula. From the high point of the property along Bramhall Street, runoff from the site drains west, north and east entering the to the City of Portland's separated storm drain system and combined sewer system (see Fig.5.4 on page 52).

In general, the campus redevelopment over the last 15 years has collected runoff from parking lots and new rooftops into a separated storm drainage systems, including storm drains in the public right of way. Where feasible the new on-site separated drainage system has been connected to a municipal separated storm drain. This includes the storm drain A Street constructed by the City in 2001 and Gilman Street constructed by MMC in 2005.

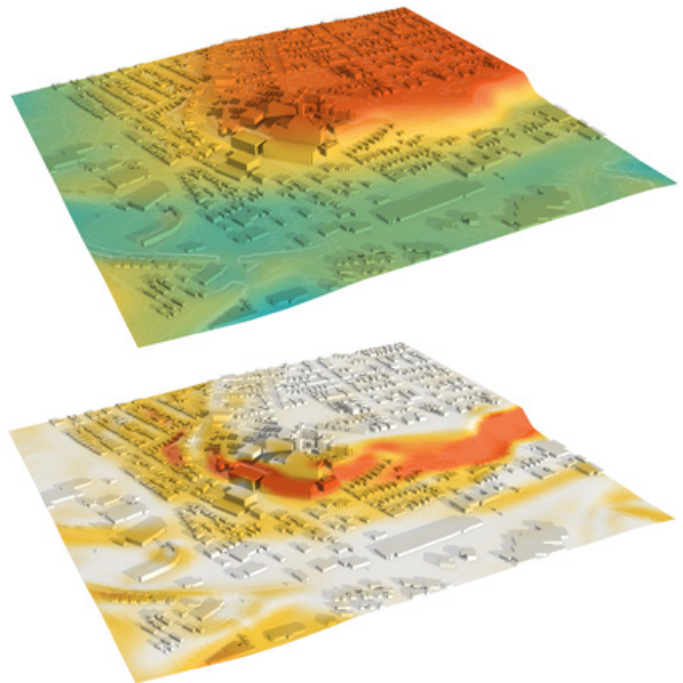
Other locations abutting the campus including Congress Street, Wescott Street, Charles Street, Bramhall Street and Bracket Streets are only served by combined sewers. At these locations, MMC's recent drainage construction terminates in a separated storm drain manholes connected to adjacent City combined sewer manholes to provide points of connections for future municipal separated storm drains. The campus' stormwater conditions were most recently evaluated in a stormwater management report prepared by Sebago Technics, Inc in 2004 as part of the Planning Board's review of the Bramhall campus expansion project which included the construction of the Women and

Infants Center, Emergency Department Expansion, Congress Street Parking Garage and the Central Utility Plant.

Stormwater Quality Features

To meet the 2004 stormwater treatment requirements, MMC installed two Downstream Defender Stormwater treatment units to treat runoff from impervious areas on the site. The redevelopment separated and redirected stormwater runoff from approximately 6.3 acres of existing development from the combined sewers in Crescent Street Ellsworth Street and Congress Street to the separated storm drain in A Street.

Fig.5.3 DIAGRAMS ILLUSTRATING ELEVATION AND LOCATION OF STEEP SLOPES



A 6' diameter unit is installed to in the Congress Street Parking Garage treating runoff from the garage (see Location 2 on Fig.5.4 on page 52), and a 10' diameter unit was installed at in Gilman Street (see Location 6 on Fig.5.4 on page 52).

FEMA Flood Zones

The MMC Bramhall campus is not located in a FEMA-designated flood zone. The 100-year flood zone boundary is located at the western edge of the Pan Am rail line and consist of flood-prone flats along the Fore River. Redevelopment on MMC's campus is not expected to impact existing flood risk in this area.

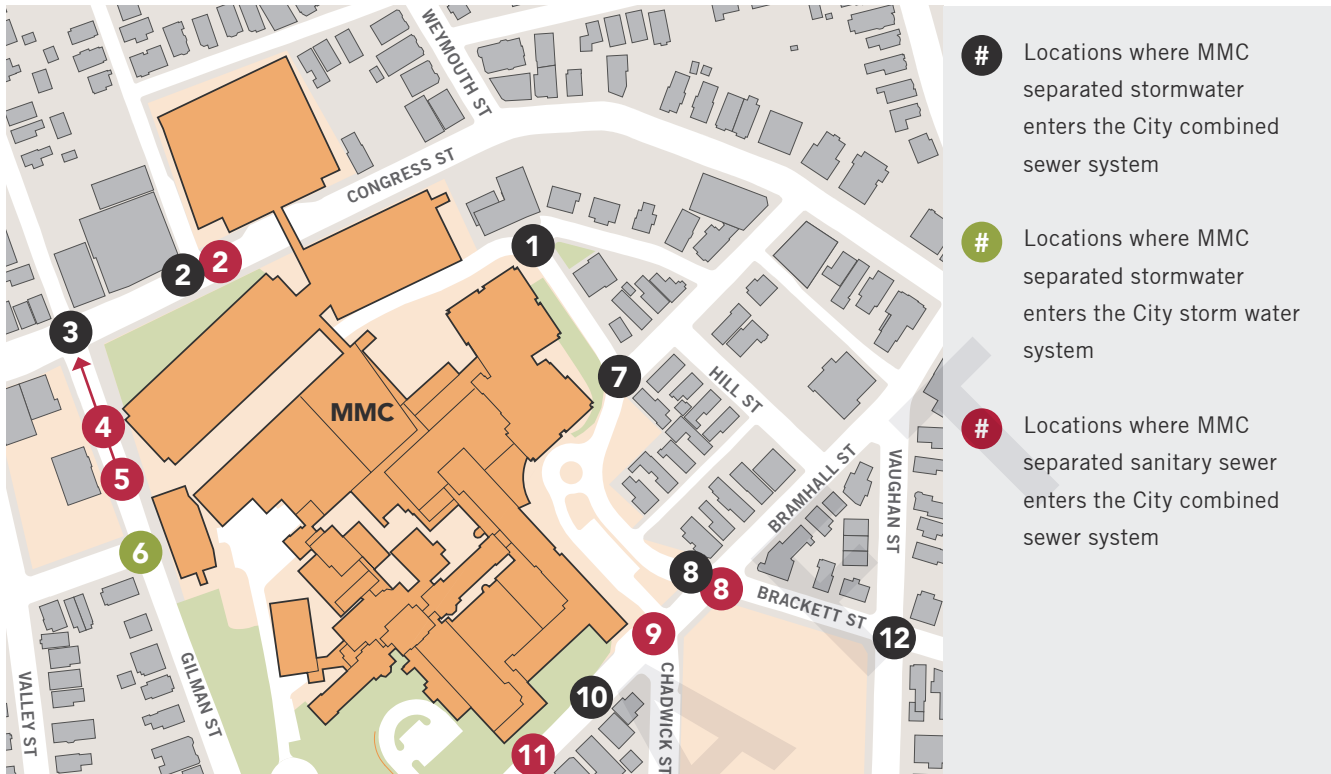
UTILITY INFRASTRUCTURE

As part of the master planning process, MMC is assessing capacity of public utility infrastructure to accommodate campus growth. The following pages document baseline conditions. *Estimates of additional capacity needs, if any, is currently being determined.*

The MMC campus is served by the City of Portland's combined sewer system. Located at a high point in the west end of the Portland peninsula, the campus buildings discharge to the City system at approximately eleven locations (see Fig.5.4 on page 52).

Due to the age of the public system and buildings, record plans of the existing sewer systems may be incomplete and additional currently unidentified connections may exist.

Fig.5.4 EXISTING SEWER CONNECTION POINTS



LOC.	MMC STORM WATER FLOWS	MMC SANITARY FLOWS
1	Runoff from the campus and storm drains constructed by MMC in Westcott St enters a combined sewer manhole at the intersection of Wescott St and Crescent St. The outfall of this system a 12" combined sewer that drains in a westerly direction along Crescent St, eventually draining to Park Ave via sewers in Ellsworth St, Congress St and Weymouth St.	N/A.
2 2	Separated runoff from the MMC parking garage enters the municipal combined sewer at the intersection of Congress St and Forest St. The sewer outlet from this manhole is an 18" reinforced concrete pipe that drains north in Forest St to Park Ave.	Sanitary sewer outfalls from the MMC parking garages enter the municipal combined sewer at the intersection of Congress and Forest St. The sewer outlet from this manhole is an 18" reinforced concrete pipe that drains north in Forest St to Park Ave. Areas tributary to this system include the Emergency Department, Women and Infants Center and Richards Wing.
3	Runoff from areas of the campus along Congress and Gilman St enter catch basins connected to the City's combined sewer system at the intersection of Gilman and Congress St. From this point the combined sewer drains north in Gilman St to Park Ave. Runoff in the roadway that bypasses the catch basins at the intersection runs west along Congress to St John St.	Sanitary sewer flows from #4 and #5 enter the City combined sewer at this location.

LOC.	MMC STORM WATER FLOWS	MMC SANITARY FLOWS
4	N/A.	The sanitary sewer serving the LL Bean Building, Annex B / Maine General Bldg, and the Engineering Services Building enters the City's 12" concrete sewer in Gilman St. From this point the sewer drains north in Gilman St to Congress St (#3) and continues to Park Ave.
5	N/A.	The sewer service from the Central Utility Building enters the 12" concrete City sewer in Gilman St, a short distance above Location 4.
6	Runoff at the intersection of Gilman St and A St at the upstream end of a separated storm drainage system constructed by the City of Portland in 2001 as part of the St. John St sewer separation project. The storm drain was extended along A St, from its intersection with St. John St to a drain manhole in Gilman St opposite the MMC Central Utility Plant. This storm drain was extended to the hospital property specifically for the purpose of providing a point of connection for separated stormwater runoff from the hospital. In 2005 MMC constructed drainage on campus to collect runoff from areas of the site including the existing emergency room parking area, L.L. Bean Wing, and service areas abutting the Central Utility Plant to the A St storm drain. This project also extended the separated storm drain in Gilman St to the south, separating runoff in Gilman St and the Dana Center from the City's combined sewers.	N/A.
7	Runoff at the intersection of Ellsworth St and Wescott St. Separated storm drains constructed by MMC in 2005 connect to a combined sewer system manholes in Ellsworth St. The combined sewer drains in an east in Ellsworth St towards to Congress St.	N/A.
8	8 Separated storm drainage from the MMC parking lot enters the combined sewer in Charles St at its intersection with Bramhall St.	Sanitary sewer manhole in the intersection of Bramhall and Brackett Sts where sewer services from Pavilions A and C connect to the City sewer. The outfall of the manhole at this location is a 15" sewer that drains to the east in Bramhall St.
9	Runoff from small areas of the site along Bramhall St enters the combined sewer system at Location 8.	Sewer service from the south end of Pavilion A enters a City sewer manhole at the intersection of Bramhall and Chadwick St. From this location, the sewer continues east to Location 8.
10	Small areas along Bramhall St enter catch basins in the city right-of-way	N/A.
11	N/A.	Sewer manhole in Bramhall St where a sewer service from the Dana Center enters the City sewer in Bramhall St. From this location, the sewer continues east to Location 9.
12	Runoff at the intersection of Brackett St and Vaugh St where separated MMC storm drains in the Brackett St parking lot connects to the combined sewer draining southeast in Bracket St.	N/A.

DESIGN GUIDELINES

FORTHCOMING.

Building Design Guidelines

Neighborhood Integration

Signage Guidelines

Lighting Guidelines

Crime Prevention Through Environmental Design

DRAFT

Campus Design Guidelines are currently under development. The following pages include information on design drivers that are being considered in the architectural, landscape and urban design of the future MMC campus.

Design Drivers

Our ambition is to create a positive patient and visitor experience that supports healing. The design should be transformative yet compatible with surrounding neighborhood fabric.

COMMUNITY

Positive Patient,
Family & Community
Experience



Initial Driving Concepts

- Clear visitor circulation and experience
- Access to views, natural light and nature
- Legible and comprehensible building mass and organization
- Clear separation between public and private
- Integration of urban and natural

ADAPTABILITY

Spatial and
programmatic
flexibility



Potential Design Solutions

- Streetscape development
- Food and beverage: mobile carts or fixed pavilions
- Exterior dining courts
- Patient and family courts
- Staff courts
- Sculptural events: permanent and temporary
- Nutritional education gardens

HEALING

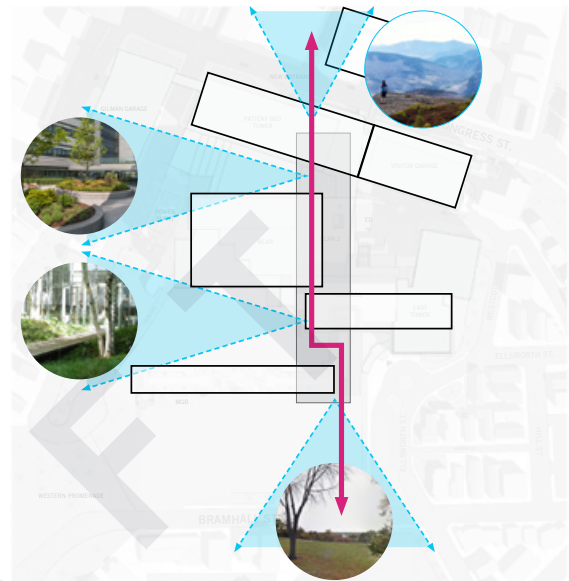
Spaces that
promote healing



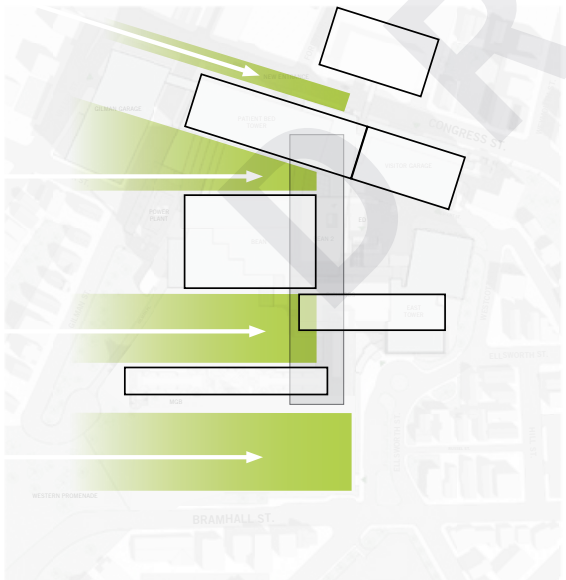
Fig.6.1 CAMPUS DESIGN FRAMEWORK



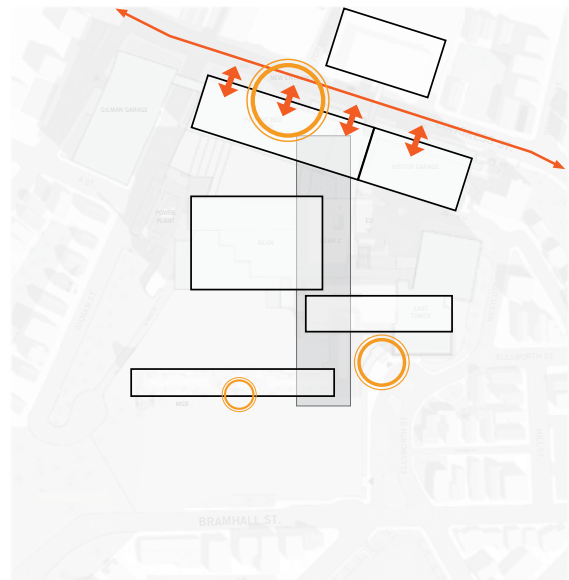
The Western Promenade percolates through the campus



Clear wayfinding with views out to nature



Green Courtyards



Congress Street as a new urban edge

CONSTRUCTION + OPERATIONS

FORTHCOMING.

Property Management Framework

Construction Management Framework

Noise Abatement Strategy

Hazardous Material Management Strategy

DRAFT

REGULATORY FRAMEWORK

The Institutional Overlay Zone (IOZ) is expected to include development regulations guiding the future growth of the MMC campus.

The following pages describe the regulatory framework that must be in place to enable planned projects (described earlier in this section) and allow flexibility for sustainable, long-term transformation of the campus as it updates its facilities to meet the healthcare standards and needs of the day.

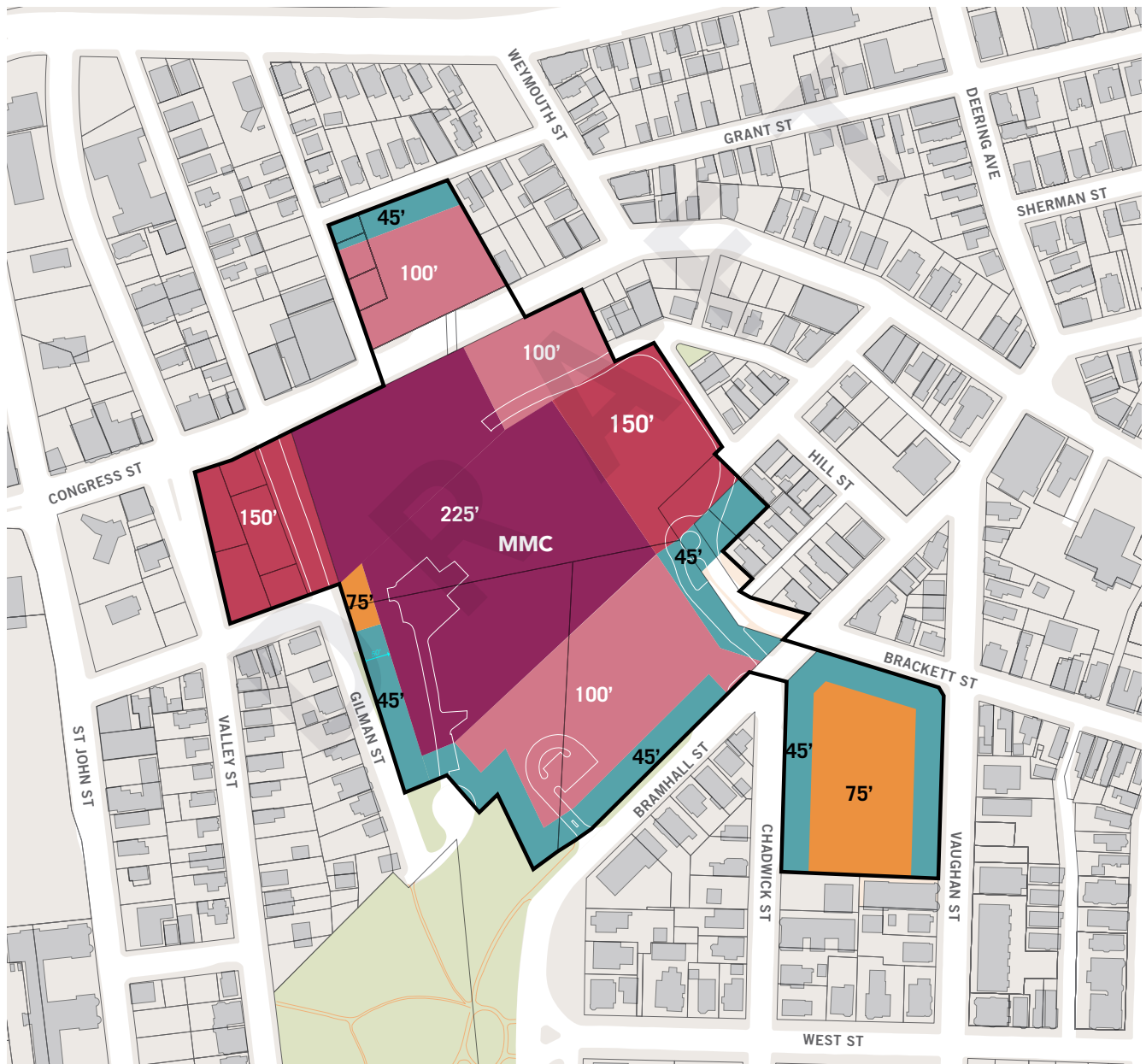
The regulatory framework included in the following pages is a preliminary, and partial draft. A full draft will be submitted following:

- **the publication of the final IOZ requirements by the City of Portland, and,**
- **input from public meetings to be held as part of MMC's master planning process.**

BUILDING HEIGHT

Fig.8.1 MAP OF PROPOSED HEIGHTS

- Parcel boundary
- Proposed IOZ Boundary
- 45' maximum height
- 75' maximum height
- 100' maximum height
- 150' maximum height
- 225' maximum height



BUILDING SETBACKS

Fig.8.2 MAP OF PROPOSED MINIMUM FRONT SETBACKS

- ZERO FEET
- 5 FEET
- 20 FEET

