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Memorandum

To: Commissioners

From: Paul Parker

Date: February 16, 2012 pep

Re: Johns Hopkins Bayview Medical Center
Docket No. 11-24-2321

* *

Enclosed is a staff report and recommendation for a Certificate of Need ("CON") application filed by Johns Hopkins Bayview Medical Center in Baltimore. The core of the project is expansion of the emergency department ("ED") facilities of the hospital. The building addition providing the expanded ED facilities will also add dedicated rooms for patient observation. Pediatric facilities are being relocated and reconfigured to the new space as well and the hospital's existing obstetric facilities will expand into the space vacated by pediatrics. The mix of obstetric and pediatric beds will be altered but additional bed capacity designed for inpatients will not be altered. Patient rooms added at JHBMC through this project are designated as observation bed space, used by patients who may be eventually admitted or only observed and discharged without admission.

The total estimated cost of the project is $40,098,889 and the project will be funded primarily through debt ($29.7 million) and cash ($10.1 million). JHBMC states that it "intends" to seek a rate increase in the future to "help fund this project" but no request for a rate increase has been filed with HSCRC.

This project contains no elements that categorically require CON review and approval. The cost estimate, which is well above the current hospital capital expenditure threshold ($10.95 million) requiring approval, is the only basis for this review. The hospital has chosen to obtain CON approval to make a substantive rate increase request possible but could implement this project without CON approval by "pledging" to limit any rate adjustment to a total of $1.5 million.

IN THE MATTER OF	*	**BEFORE THE**
	*	
JOHNS HOPKINS BAYVIEW	*	**MARYLAND HEALTH**
	*	
MEDICAL CENTER, INC.	*	**CARE COMMISSION**
	*	
DOCKET NO. 11-24-2321	*	
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Staff Report and Recommendation

February 16, 2012

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I. INTRODUCTION

A. The Applicant and the Project

Johns Hopkins Bayview Medical Center, Inc. ("JHBMC") is a 513-bed hospital located in the City of Baltimore at 4940 Eastern Avenue. JHBMC is a not-for-profit corporation and is part of the Johns Hopkins Health System, Inc., which includes three other Maryland general acute care hospitals (The Johns Hopkins Hospital, Howard County General Hospital, and Suburban Hospital, in Montgomery County). The land title for the land constituting the JHBMC campus is held by FSK Land Corporation, an affiliate of JHHS, while the buildings are owned by JHBMC. The facility is primarily a general acute care hospital, with 348 licensed acute care beds. It also holds licenses for 85 special hospital beds (nine medical rehabilitation and 76 chronic care beds) and 80 comprehensive care facility (nursing home) beds.

JHBMC proposes to expand total emergency department (ED) treatment spaces from 40 to 48, relocate and reconfigure its pediatric unit, which will incorporate five ED spaces for children, create adult and pediatric observation and holding spaces, and convert the vacated pediatric unit into expanded obstetrics and gynecology inpatient space. This project will decrease the number of pediatric licensed beds by half (five beds) and increase the number of obstetrical licensed beds by five, from 17 to 22 beds. Two medical surgical beds will be dedicated for gynecological cases. See Table 1 for acute bed inventory by service:

Table 1: Current and Proposed Licensed Acute Care Bed Capacity
Johns Hopkins Bayview Medical Center

Service	Current Bed Capacity	Beds to be Added or Reduced	Proposed Bed Capacity
General medical/surgical	215	(2)	213
Gynecologic	0	2	2
Definitive observation/stepdown	34		34
Medical/surgical intensive care	30		30
Medical/cardiac critical care	12		12
Burn critical care	10		10
Obstetric	17	5	22
Pediatric	10	(5)	5
Psychiatric (Adult)	20		20
TOTAL ACUTE CARE BEDS	**348**	**0**	**348**

Source: Adapted from JHBMC CON Application, page 29.

In order to accomplish this, a 53,970 gross square foot ("GSF") "annex" building addition will be constructed to the north and west of the existing ED facility consisting of three above-ground floors and a basement. The current ED opened in 1994 in the new Francis Scott Key ("FSK") Pavilion. While ED treatment spaces increased to 40 from 35 at that time, the physical plant has not changed substantively during the intervening 18 years. The aging B Building to the west of the ED will be demolished prior to construction. The first above-grade floor of the addition will house the expanded adult ED. The existing ED space of 13,680 GSF will be renovated and a new Psychiatric Evaluation Services ("PES:) unit with six treatment spaces, separated by partial walls, will be created. This will include four observation/holding spaces, two triage/interview rooms, and two seclusion rooms. The main ED area will have two

dedicated resuscitation rooms, closest to the ambulance entrance.

The second floor of the addition will include a 13-space, all private room adult observation and holding unit. Each room will have its own private bathroom with shower. The third floor will house a new combined pediatric inpatient, emergency, and observation/holding unit. This will include five private inpatient rooms and four private observation spaces, each with a bathroom, and five ED treatment spaces, all dedicated to pediatric patients.

After relocation of the inpatient pediatric unit from A Building 2nd floor to the newly constructed annex, the adjoining obstetrical inpatient unit (in A Building) will be expanded. This renovation phase will encompass 5,060 GSF and will add five private obstetric (post partum) rooms and two private gynecologic rooms, as well as the neonatal abstinence syndrome nursery, parent bonding space and one parent sleep room.

Appendix A contains "conceptual design" drawings of the new construction and renovated space for each involved floor.

The total estimated cost of the project is $40,098,889; $39,659,972 in capital costs and the balance in financing and other cash requirements. JHBMC proposes to fund this project with $29,700,000 in bond sale proceeds, $10,071,248 in cash, and $327,641 in interest income. "JHBMC intends at some time in the future to seek from the Health Services Cost Review Commission" ("HSCRC") an increase in rates to "help fund this project."

C. Summary of Staff Recommendation

Staff recommends approval of the proposed project. The key finding of Staff's review of the proposed project can be summarized as follows:

- JHBMC has demonstrated a need to add capacity and improve facilities for adult ED services, to improve throughput of patients in this major entry point for care and the patient experience. Improving operational efficiency at hospitals is needed and this project should improve the efficiency of JHBMC's pediatric services through the proposed reconfiguration, combining emergency medical care, inpatient care, and observation in a single unit. The project meets capacity needs created by increasing volumes of adult observation patients and reconfigures the way in which these patients are accommodated, which may have operational benefits;

- JHBMC has demonstrated that the proposed project is more cost effective than development of a new building or expansion alternatives aimed at creating sufficient inpatient capacity to handle both admitted and observation patients;

- JHBMC has documented the availability of sufficient resources to fund the project, as proposed, and its financial projections and assumptions are reasonable. These indicate feasibility of the project and long-term viability of JHBMC; and

- The project will not have a significant negative impact on access or on use, costs, or charges of other health care facilities. It will increase the cost of delivering services at JHBMC, but this impact is reasonable to obtain the facility and service improvements and operational improvements gained through the expenditure.

This project does not change the licensed or physical inpatient bed capacity of JHBMC, but alters the mix of bed capacity for obstetric and pediatric patients. .JHBMC has indicated that it intends, at some time in the future, to seek approval to increase its charges, to defray the costs of this project. It is uncertain if it would qualify for such consideration.

II. PROCEDURAL HISTORY

A. Review of the Record

On June 3, 2011, JHBMC submitted a Letter of Intent to apply for a Certificate of Need ("CON") for this project. This letter was acknowledged by Commission staff on June 3, 2011 [Docket Item ("DI") #1].

The hospital filed its application for CON on August 5, 2011 (DI #2).

Commission staff acknowledged receipt of the application for the project (DI #3) on August 9, 2011 and requested publication of notice of receipt of the application in the next issue of the Baltimore Sun (DI #4) and Maryland Register (DI #5).

On August 13, 2011, the Baltimore Sun sent MHCC proof of publication of the application notice. (DI #6).

On August 19, 2011 staff requested additional information from JHBMC (DI #7).

JHBMC responded to the additional information questions on September 6, 2011 (DI #8).

On September 23, 2011, staff also requested publication of a notice of the application's docketing in the next issue of the Maryland Register. (DI #9).

On September 26, 2011, staff sent additional information questions to JHBMC (DI#10).

On September 26, 2011, staff requested publication of a docketing notice in the Baltimore Sun (DI #11). On September 27, 2011, staff requested review and comment on the CON application by the Baltimore City Health Department. (DI#12)

On October 6, 2011, the Baltimore Sun sent MHCC proof of publication of the docketing notice. (DI #13).

On October 20, 2011, staff received a request for additional time to respond to the September 26, 2011 questions. (DI #14). On October 26, 2011, JHBMC's response was received. (DI #15).

On January 5, 2011, staff requested comments from HSCRC (DI #16).

On January 6, 2011, corrected financial information was provided by JHBMC. (DI #17).

On January 27, 2012, staff received additional information from JHBMC responding to additional information requested by HSCRC on financial projections and assumptions. (DI # 18).

B. Interested Parties

There are no interested parties in this review.

C. Local Government Review and Comment

Comments were not filed.

D. Community Support

According to JHBMC, it enjoys strong community support in general. Letters of support were provided. The application states that community leaders meet regularly with JHBMC executives and program leadership on the hospital's Community Advisory Boards. In addition, the Medical Center states that it places a strong focus on going into the community to assess needs and hear concerns firsthand, and holds active memberships in most of the community and business organizations in its service area. JHBMC further states that the letters of support reflect their ongoing engagement with the hospital, and their recognition of the need for an expanded emergency department. These letters can be viewed at the Commission's website

III. BACKGROUND

A. Hospital Service Area and Demographics

COMAR 10.24.10.06(25) defines a hospital "primary service area" as "The Maryland postal zip codes from which the first 60% percent of a hospital's patient discharges originate during the most recent twelve month period…" JHBMC identifies four ZIP code areas (21222, 21224, 21221, and 21206) that account for 62% of its ED visits in 2011, showing ED utilization data for the years since 2008 to confirm the stability of this primary service area. These ZIP code areas fall in Baltimore City and the Baltimore suburbs of Dundalk and Essex. The following table shows estimated and projected primary service area population, by age cohort, provided by the applicant. Note that JHBMC's PSA is expected to see a 1.5% decrease in population by 2015. According to the applicant based on CLARITAS projections, the national population is expected to increase by 4.1% during the same period.

Table 2: JHBMC Primary Service Area - Population by Age Group

Age Group	2010		2015		% Change
	#	% of Total	#	% of Total	
0-14	37,545	19.5%	37,239	19.7%	**-0.8%**
15-17	8,024	4.2%	6,937	3.7%	**-13.5%**
18-24	17,401	9.1%	16,224	8.6%	**-6.8%**
25-34	25,023	13.0%	24,183	12.8%	**-3.4%**
35-54	54,958	28.6%	51,225	27.1%	**-6.8%**
55-64	21,849	11.4%	24,316	12.8%	**11.3%**
65+	27,332	14.2%	29,117	15.4%	**6.5%**
Total	**192,132**	100.0%	**189,241**	100.0%	**-1.5%**

Source: Adapted from JHBMC Application, page 60.

As illustrated in the table, the greatest growth is expected for those ages 55-64, followed by those 65 and older, groups with relatively high use rates for hospital services. Moreover, these groups will represent more than 28% of the population in 2015. It is noteworthy that the pediatric population (those less than 15 years) will decline in terms of total population but still represent a larger percentage of the total population.

Based on the latest projections from the Maryland Department of Planning, as illustrated in the table below, it appears that JHBMC's service area is expected to decrease in population while Baltimore City, the Baltimore region, and Maryland are all projected to increase in population by 2015. However, it is important to note that neither of the population data sources used by the applicant or the Department of Planning are based on the 2010 Census. The Department of Planning's estimate for 2010 is very close to the reported 2010 population for the state of 5,773,552 as reported in the Census.

Table 3: Population Projections, 2010 and 2015

	2010	2015	%Change
MARYLAND	**5,774,000**	**6,038,450**	**4.4%**
BALTIMORE REGION	**2,676,850**	**2,778,350**	**3.7%**
Anne Arundel County	525,700	546,500	3.8%
Baltimore County	801,700	830,400	3.5%
Carroll County	173,100	183,600	5.7%
Harford County	245,900	258,800	5.0%
Howard County	285,600	298,800	4.4%
Baltimore City	644,850	660,250	2.3%

Source: MD Department of Planning; November 2010 Update

B. Selected JHBMC and Regional Utilization Trends

Medical Surgical General Acute Care (MSGA)

As illustrated in the table below, Maryland hospitals, broadly, saw declines in MSGA patients in 2010 after reaching recent-period peaks in 2009. (See pattern of discharges over the last five years for the City, Central Maryland, and the State.) JHBMC and The Johns Hopkins Hospital (JHBMC's closest neighboring hospital) experienced a less volatile path, but 2010 volume was smaller than that experience in 2005.

With 215 MSGA and 34 observation/stepdown beds (a total of 249 beds and 76,385 patient days, JHBMC had an average daily census ("ADC") of 209 patients and an average length of stay ("ALOS") of 4.33 days in 2010. Central Maryland, with 5,246 licensed MSGA beds in 22 hospitals and 1,364,037 patient days, had an ALOS of 4.2 days.

Table 4: MSGA Discharges, 2005 to 2010
Selected Maryland Hospitals

Hospital(s)	MSGA DISCHARGES						
	2005	2006	2007	2008	2009	2010	% Change
Johns Hopkins Bayview	18,114	18,259	17,941	17,557	17,768	17,635	-2.6%
Johns Hopkins	39,331	35,319	34,394	34,670	34,739	34,108	-13.3%
Baltimore City Hospitals	**189,703**	**188,046**	**187,945**	**190,169**	**194,121**	**185,900**	**-2.0%**
Central MD Hospitals	**327,392**	**328,944**	**329,656**	**337,848**	**341,305**	**321,602**	**-1.8%**
All Maryland Hospitals	**530,882**	**534,663**	**539,085**	**552,155**	**554,941**	**531,986**	**0.2%**

Source: Maryland Health Care Commission

JHBMC projects average annual growth in MSGA admissions between 2011 and 2019 of 1.6%, a clear turnaround from the recent trend. This assumption is probably optimistic.

Obstetrics Utilization

The following table shows all hospitals in Central Maryland with licensed obstetric ("OB") beds. *Note that the total OB discharges by geographic region include utilization in all hospitals since there are a relatively small number of OB related admissions that occur at hospitals without OB licensed beds.*

As shown, JHBMC had a 4.9% increase in OB discharges from 2005 to 2010, compared to a 3.0% decline for all Baltimore City hospitals. Given that its sister and nearby facility, The Johns Hopkins Hospital, experienced a greater than a 10% decrease in OB use there is a significant possibility that most of this increase was a result of reallocation of patients within the system. The system's other facility in Central Maryland, Howard County General also experienced an increase (2.5%) in utilization. However, other nearby hospitals, including Harbor and Maryland General, also saw double digit decreases like John Hopkins while Mercy and University of Maryland experienced even greater increases than JHBMC.

Table 5: Obstetric Discharges, 2005-2010, Selected Maryland Hospitals

OBSTETRIC	OBSTETRIC DISCHARGES						
	2005	2006	2007	2008	2009	2010	% Change
ANNE ARUNDEL	5,522	5,722	5,949	5,894	5,743	5,497	-0.5%
BALTIMORE-WASHINGTON	44	34	38	46	132	763	1634.1%
Anne Arundel Co. Hospitals	**5,566**	**5,756**	**5,987**	**5,940**	**5,875**	**6,260**	**12.5%**
HARBOR	2,036	2,143	1,992	2,039	1,959	1,824	-10.4%
JOHNS HOPKINS BAYVIEW	1,647	1,879	1,951	2,091	1,805	1,727	4.9%
JOHNS HOPKINS	2,509	2,537	2,567	2,499	2,577	2,241	-10.7%
MARYLAND GENERAL	1,291	1,439	1,334	1,213	1,068	861	-33.3%
MERCY	2,785	3,009	3,193	3,123	3,359	3,302	18.6%
SAINT AGNES	2,246	2,548	2,358	2,269	2,145	2,038	-9.3%
SINAI	2,680	2,926	2,984	2,996	2,550	2,573	-4.0%
UNIVERSITY OF MARYLAND	1,788	1,975	1,930	2,051	1,863	1,939	8.4%
Baltimore City Hospitals	**17,055**	**18,508**	**18,356**	**18,330**	**17,391**	**16,545**	**-3.0%**
FRANKLIN SQUARE	3,062	3,075	3,069	3,047	2,928	2,793	-8.8%
GREATER BALTIMORE	4,539	4,540	5,043	5,016	4,779	4,741	4.5%
SAINT JOSEPH	2,625	2,726	2,423	2,336	2,293	2,244	-14.5%
Baltimore Co. Hospitals	**10,259**	**10,361**	**10,572**	**10,425**	**10,019**	**9,808**	**-4.4%**
CARROLL	1,402	1,388	1,404	1,408	1,244	1,295	-7.6%
UPPER CHESAPEAKE	1,559	1,638	1,677	1,694	1,627	1,503	-3.6%
HOWARD COUNTY GENERAL	3,479	3,000	3,197	3,360	3,470	3,566	2.5%
Central MD Hospitals	**39,332**	**40,658**	**41,201**	**41,170**	**39,640**	**38,993**	**-0.9%**
All Maryland Hospitals	**75,978**	**78,559**	**79,571**	**79,243**	**77,215**	**76,156**	**0.2%**

Source: Maryland Health Care Commission

While JHBMC has seen an increase in OB discharges, OB patient days have declined by more than 12% since 2005, as a result of JHBMC's reduced average length of stay. In 2005, its OB ALOS of 3.16 days was among the region's highest. By 2010, the average OB stay was 7% below the region's average.

Table 6: Obstetric Beds and Days, 2005-2010, Selected Maryland Hospitals, and 2010 OB ALOS

OBSTETRIC	Licensed OB Beds	Inpatient Days*			2010 ALOS (days)
		2005	2010	% Change	
ANNE ARUNDEL	60	15,534	14,524	-6.5%	2.64
BALTIMORE-WASHINGTON	18	96	1,891	1869.8%	2.48
Anne Arundel Co. Hospitals	**78**	**15,630**	**16,415**	**5.0%**	**2.62**
HARBOR	25	5,360	5,303	-1.1%	2.91
JOHNS HOPKINS BAYVIEW	17	5,207	4,568	-12.3%	2.65
JOHNS HOPKINS	35	9,236	7,492	-18.9%	3.34
MARYLAND GENERAL	20	3,408	2,255	-33.8%	2.62
MERCY	26	8,646	10,176	17.7%	3.08
SAINT AGNES	23	6,488	5,391	-16.9%	2.65
SINAI	23	8,639	7,987	-7.5%	3.10
UNIVERSITY OF MARYLAND	30	6,603	6,207	-6.0%	3.20
Baltimore City Hospitals	**199**	**53,587**	**49,379**	**-7.9%**	**2.99**
FRANKLIN SQUARE	37	8,545	7,534	-11.8%	2.70
GREATER BALTIMORE	60	14,114	14,909	5.6%	3.14
SAINT JOSEPH	20	8,165	6,471	-20.7%	2.88
Baltimore Co. Hospitals	**117**	**30,824**	**28,914**	**-6.2%**	**2.96**
CARROLL	20	3,609	3,301	-8.5%	2.55
UPPER CHESAPEAKE	13	3,677	3,395	-7.7%	2.26
HOWARD COUNTY GENERAL	34	9,806	9,704	-1.0%	2.72
Central MD Hospitals	**461**	**117,133**	**111,108**	**-5.1%**	**2.86**

Source: Utilization - Maryland Health Care Commission; Licensed Beds – MHCC Annual Report Effective July 1, 2011.
*Does not include days of OB patients in hospitals without licensed OB beds.

The applicant does not project any significant change in OB admissions or patient days going forward from it FY2011 reported level of utilization.

Pediatric Utilization

As detailed below, JHBMC has seen the highest rate of increase in pediatric discharges from 2005 to 2010 among Central Maryland hospitals with licensed pediatric beds. But it is a small provider of inpatient pediatric services, accounting for only 2.4% of the pediatric discharge total of patients under 15 years of age for all Baltimore City hospitals in 2010. JHBMC reports higher demand for its pediatric unit than shown in the following table, which uses the Commission's age band (0-15) definition of pediatric admissions. For example, JHBMC reports a total of 470 actual pediatric unit admissions in FY2011.

Table 7: Pediatric Discharges Aged 0-15, 2005-2010, Selected Maryland Hospitals

PEDIATRIC	PEDIATRIC DISCHARGES						
	2005	2006	2007	2008	2009	2010	% Change
ANNE ARUNDEL	603	454	439	529	579	605	0.3%
BALTIMORE-WASHINGTON	558	460	469	422	571	429	-23.1%
Anne Arundel Co. Hospitals	**1,161**	**914**	**908**	**951**	**1,150**	**1,034**	**-10.9%**
HARBOR	494	536	520	543	571	431	-12.8%
JOHNS HOPKINS BAYVIEW	242	270	299	269	344	291	20.2%
JOHNS HOPKINS	6,165	5,969	6,022	5,974	6,484	6,112	-0.9%
MERCY	245	181	193	146	183	153	-37.6%
SAINT AGNES	861	962	907	886	854	857	-0.5%
SINAI	1,713	1,781	1,780	1,638	1,604	1,424	-16.9%
UNION MEM.	495	456	435	325	156	24	-95.2%
UNIV. OF MARYLAND	2,256	2,414	2,375	2,335	2,803	2,666	18.2%
Baltimore City Hospitals	**12,471**	**12,569**	**12,531**	**12,116**	**12,999**	**11,958**	**-4.1%**
FRANKLIN SQUARE	730	754	876	938	1,058	757	3.7%
GREATER BALTIMORE	546	539	480	433	371	270	-50.5%
SAINT JOSEPH	370	335	327	277	295	247	-33.2%
Baltimore Co. Hospitals	**1,646**	**1,628**	**1,683**	**1,648**	**1,724**	**1,274**	**-22.6%**
CARROLL	382	325	340	326	392	**364**	-4.7%
UPPER CHESAPEAKE	738	739	741	692	667	563	-23.7%
HOWARD CO. GEN.	497	460	513	533	564	431	-13.3%
Central MD Hospitals	**16,895**	**16,635**	**16,716**	**16,266**	**17,496**	**15,624**	**-7.5%**

Source: Maryland Health Care Commission
*Does not include discharges of pediatric patients in hospitals without licensed pediatric beds.

Pediatric ALOS at JHBMC's has also increased in recent years, spurring growth in pediatric patient census.

Table 8: Pediatric Beds and Days, 2005-2010, Selected Maryland Hospitals, and 2010 Pediatric ALOS

PEDIATRIC	Licensed Peds Beds	Inpatient Days*			2010 ALOS (days)
		2005	2010	% Change	
ANNE ARUNDEL	8	1,145	868	-24.2%	1.43
BALTIMORE-WASHINGTON	10	877	775	-11.6%	1.81
Anne Arundel Co. Hospitals	**18**	**2,022**	**1,643**	**-18.7%**	**1.59**
HARBOR	5	1,214	1064	-12.4%	2.47
JOHNS HOPKINS BAYVIEW	10	535	926	73.1%	3.18
JOHNS HOPKINS	144	32,737	32437	-0.9%	5.31
MARYLAND GENERAL	5	509	318	-37.5%	2.08
MERCY	9	1,645	2186	32.9%	2.55
SAINT AGNES	35	5,099	3925	-23.0%	2.76
SINAI	2	902	31	-96.6%	1.29
UNIVERSITY OF MARYLAND	58	11,214	13744	22.6%	5.16
Baltimore City Hospitals	**268**	**53,855**	**54,631**	**1.4%**	**4.57**
FRANKLIN SQUARE	9	1,322	2427	83.6%	3.21
GREATER BALTIMORE	8	1,034	726	-29.8%	2.69
SAINT JOSEPH	4	643	579	-10.0%	2.34
Baltimore Co. Hospitals	**21**	**2,999**	**3,732**	**24.4%**	**2.93**
CARROLL	7	633	663	4.7%	1.82
UPPER CHESAPEAKE	5	1,469	1022	-30.4%	1.82
HOWARD COUNTY GENERAL	6	814	769	-5.5%	1.78
Central MD Hospitals	**325**	**61,792**	**62,460**	**1.1%**	**4.00**

Source: Utilization - Maryland Health Care Commission; Licensed Beds – MHCC Annual Report Effective July 1, 2011.
*Does not include days of pediatric patients in hospitals without licensed pediatric beds.

JHBMC is projecting stabilization of pediatric census at 2012 levels until 2015, and stabilization at a level 20% lower between 2015 and 2019. This projected pattern of utilization reflects the experience JHBMC expects with the opening of a reconfigured pediatric unit in 2015, combining ED and observation facilities with the inpatient facilities in a single unit, sharing staff and other resources.

Emergency Department

The following table profiles the recent history of emergency department visits at JHBMC and the hospital's projections of ED visit volume through FY 2016. Note that the applicant projects that current ED capacity will be realized in 2012 and maintained through 2014 until 2015 when the project will be operational.

Table 9 : JHBMC Historical & Projected ED Utilization

FISCAL YEAR	2007	2008	2009	2010	2011	2012-14	2015	2016	2016
Total Visits	54,129	57,627	59,060	58,871	59,119	60,131	61,334	62,560	63,811
Treatment Spaces	40	40	40	40	40	40	48	48	48
Visits/Space	1,353	1,441	1,476	1,472	1,478	1,503	1,278	1,303	1,329

Source: Adapted from CON application p. 60 & 9/6/11 completeness questions, p. 10

The following table from JHBMC's application compares the level of demand placed on ED treatment spaces at JHBMC with the recent experience at other hospitals in Central Maryland. According to this data, JHBMC had the fifth highest number of ED visits per treatment space and an annual growth rate of 2.2% from FY07-FY11. This compares to an average annual growth rate in Central Maryland of 1.6% and an average number of visits per treatment space that is 13% greater than the regional average. Moreover, at the conclusion of this project, JHBMC's projects that its number of visits per treatment space will be similar to the current average.

Table 10

Central Maryland Trends in Emergency Department Visits

		Emergency Department Visits					Treatment Spaces	Non Treatment Spaces	Visits per Treatment Space	Annual Growth Rate
		FY 07	FY 08	FY 09	FY 10	FY 11	06/01/10	06/01/10	FY 11	FY07-FY11
1	Anne Arundel Medical	72,398	76,190	77,063	76,401	76,288	44	9	1,734	1.3%
2	Harbor Hospital	46,973	52,427	56,795	58,553	59,077	35	1	1,688	5.9%
3	Balto.-Wash. Med. Ctr.	84,794	91,309	97,901	102,626	104,573	66	5	1,584	5.4%
4	St. Agnes	79,086	79,724	81,817	82,862	82,569	53	15	1,558	1.1%
5	**Johns Hopkins Bayview**	**54,129**	**57,627**	**59,060**	**58,871**	**59,119**	**40**	**6**	**1,478**	**2.2%**
6	Northwest	53,899	56,901	58,195	61,456	61,961	43	1	1,441	3.5%
7	Carroll County	50,289	51,609	52,891	52,977	54,319	39	5	1,393	1.9%
8	Mercy	52,565	55,360	59,662	60,787	62,421	45	-	1,387	4.4%
9	Howard County Gen. Hos.	76,897	76,668	74,653	75,602	76,093	55	20	1,384	-0.3%
10	Good Samaritan	55,623	55,293	56,616	58,583	59,321	45	1	1,318	1.6%
11	Sinai	70,067	73,624	73,847	74,541	78,740	61	4	1,291	3.0%
12	St. Joseph	51,957	52,363	51,809	49,467	50,184	39	3	1,287	-0.9%
13	GBMC	59,563	60,488	61,426	59,849	57,277	45	6	1,273	-1.0%
14	Upper Chesapeake Med. Ctr.	54,196	55,468	61,506	63,177	62,509	52	3	1,202	3.6%
15	Union Memorial	54,959	57,705	59,394	58,373	58,837	49	4	1,201	1.7%
16	Johns Hopkins Hospital	88,259	86,491	86,050	84,982	84,946	76	-	1,118	-1.0%
17	Maryland General	36,424	36,410	31,243	28,626	27,874	25	-	1,115	-6.5%
18	University of Maryland	64,458	64,960	65,819	66,136	67,100	62	1	1,082	1.0%
19	Franklin Square	103,780	107,283	104,740	103,592	105,989	98	1	1,082	0.5%
20	Harford Memorial	32,581	32,789	33,550	32,669	31,131	31	-	1,004	-1.1%
21	Bon Secours	20,241	21,140	24,106	25,189	26,549	29	1	915	7.0%
		1,263,138	1,301,829	1,328,143	1,335,319	1,346,877	*1,032*	*86*	**1,305**	*1.6%*

Source: ED visits as reported in Hospital Comparison June 2011.
ED Treatment Capacity, MHCC ED supplemental survey July, 2010.

Maryland monitors the ability of hospital EDs to provide care. Hospitals can place themselves in an "alert" status when the availability of certain types of beds or treatment spaces are compromised. "Yellow alert" is defined by Region III (Central Maryland) of MIEMSS as the time period when a hospital ED requests that no Priority II or Priority III patients be transported to their facility. Yellow alert is initiated because the ED is temporarily overwhelmed by high levels of demand to an extent that higher priority patients may not be managed safely. This alert is utilized for unplanned or unexpected incidents and may not exceed 8 hours for each event to a total of 8 hours for any 24-hour period beginning at 12 midnight. "Red alert" occurs when a hospital ED has no electro-cardiogram ("ECG")-monitored beds available and requests that patients, who are likely to require this type of monitoring not be transported to its facility. (An ECG monitored bed is defined as any adult critical care bed.) In this alert status, the hospital requests that all Priority II and III ECG-monitored patients be transported to the next closest appropriate hospital. MIEMSS believes it is advisable for hospitals in red alert status to be bypassed by ambulances if another facility with available resources is within a few minutes of additional travel time. Subsequent transfer to another facility for admission to a monitored bed

may be necessary. Priority II & III ECG-monitored patients will normally bypass a hospital in red alert status when being transported unless transport time will be lengthened by more than l5 minutes."

MIEMMS defines "re-route hours" as time occurring when a basic or advanced life support unit is being held at a hospital ED because the hospital does not have an appropriate space for intake of the patient. It is expected that patients be accepted by ED staff and transferred from the ambulance stretcher to a hospital gurney in a reasonable time frame, defined as twenty minutes from the arrival of the patient at triage, to the placement of the patient either in a wheelchair or on a hospital stretcher. If the patient has not been placed in a wheelchair or on a hospital gurney within the twenty minute time frame, and it does not appear that such placement will happen within the next ten minutes, the EMS Personnel advise the ED staff to place the hospital on "Re-Route" and then notify the Local Dispatch Center that the hospital is in that status. When in this type of alert status, the ED is not accepting new patients by transport. The following table profiles the experience of JHBMC's ED in maintaining availability and accessibility for patients in the last four years, in terms of MIEMSS alert status hours, compared to all hospitals in Central Maryland (Region III).

Table 11: JHBMC and Central Maryland Divert Hours by Type

		2008	2009	2010	2011*	% Change
JHBMC	Yellow Alert	1,631	2,437	990	1,446	-11.3%
	Red Alert	37	177	41	166	347.7%
	Reroute	101	117	105	139	37.8%
	Total	**1,769**	**2,731**	**1,136**	**1,751**	**-1.0%**
Region III	Yellow Alert	21,245	21,764	9,257	11,910	-43.9%
	Red Alert	8,345	6,407	4,061	4,924	-41.0%
	Reroute	1,207	1,257	1,014	1,144	-5.3%
	Total	**30,798**	**29,428**	**14,332**	**17,977**	**-41.6%**

Source: MIEMSS CHATS Region III online reports; www.miemss.org

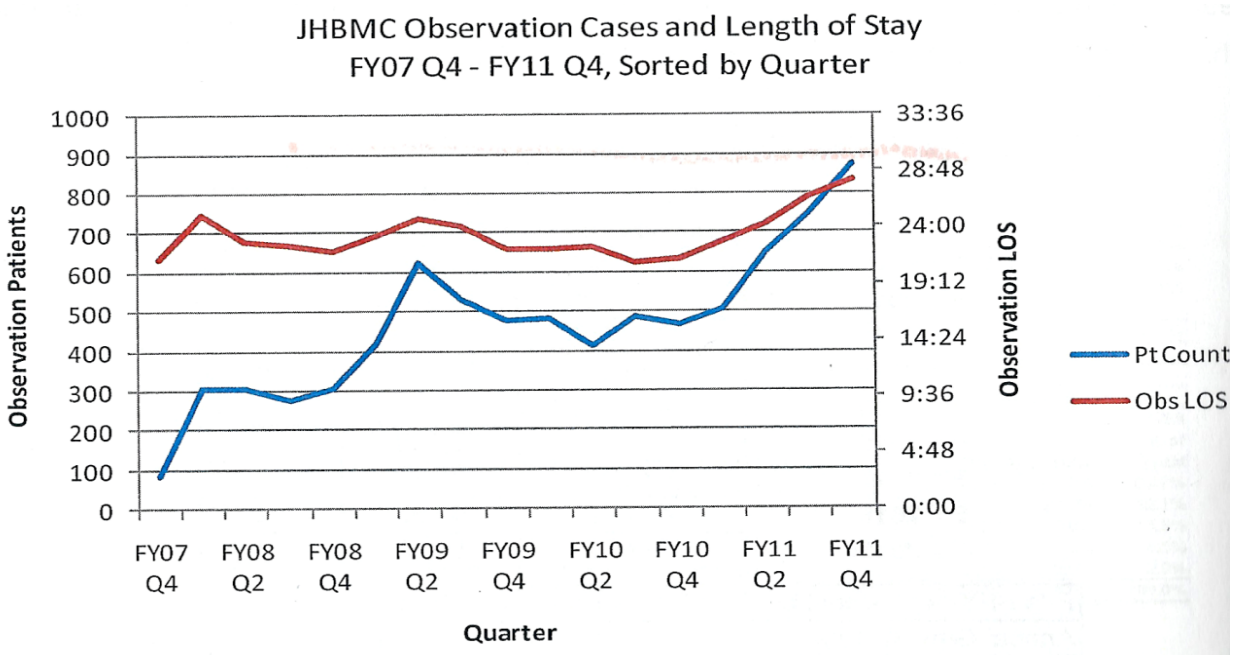
Note that while progress has been made by JHBMC in reducing its number of yellow alert hours, the rate of reduction is far less than that for the region and its red alert hours have increased substantially since 2008 while the region has experienced a significant decrease. In fact, JHBMC's diversion hours represent almost 10% of the region's hours, as shown here. Note also that JHBMC's yellow alert hours represent more than 80% of these diversion hours while they represent only about 66% of diversion hours in the region. The applicant did provide a graph that showed a substantial decrease in yellow and red diversion hours from FY02 to FY08 for its facility, but did not provide similar data for the region. The proposed project should have a positive impact on reducing these hours, particularly the yellow alert and reroute hours.

Observation/Holding Beds

JHBMC's emergency department observation program was officially implemented in January 2007 and in FY2011 annual emergency department observation cases increased to 2,786 annually with average length of stay (LOS) of 28 hours. As seen in the chart below provided by the applicant, observation volumes increased from 158 in FY2007 to 2,786 in

FY2011. The applicant notes that for the fourth quarter of FY2011, the JHBMC ED averaged almost 300 observation cases per month (302 cases in April 2011, 305 in May 2011 and 278 per month June), annualizing to almost 3,600 cases.

Chart 1



JHBMC attributes the longer LOS to the fact that commercial insurance and Medicare will authorize only observation status until the need for admission is clearly determined, with Medicare allowing up to 48 hours of observation status. In FY2011, 34% of JHBMC's adult observation cases were Medicare. The applicant notes that this has resulted in a dramatic increase in the number and clinical acuity of observation cases.

IV. STAFF REVIEW AND ANALYSIS

The Commission is required to make decisions on CON applications in accordance with the general Certificate of Need review criteria at COMAR 10.24.01.08G (3) (a) through (f).

A. The State Health Plan

COMAR 10.24.01.08G(3)(a)State Health Plan.
An application for a Certificate of Need shall be evaluated according to all relevant State Health Plan standards, policies, and criteria.

The relevant State Health Plan chapter is COMAR 10.24.10, Acute Inpatient Services. While this project includes an increase in obstetric bed capacity, accomplished through renovating and reusing the vacated pediatric unit space, this aspect of the project is not viewed as significant enough to require evaluation under COMAR 10.24.12, a State Health Plan chapter that primarily addresses standards for introducing OB services as a new service.

COMAR 10.24.10.04A — General Standards.

> **(1) Information Regarding Charges.** ***Information regarding hospital charges shall be available to the public. After July 1, 2010, each hospital shall have a written policy for the provision of information to the public concerning charges for its services. At a minimum, this policy shall include:***
>
> ***Information regarding hospital charges shall be available to the public. Each hospital shall have a written policy for the provision of information to the public concerning charges for its services. At a minimum, this policy shall include:***
>
> ***(a) Maintenance of a Representative List of Services and Charges that is readily available to the public in written form at the hospital and on the hospital's internet web site;***
>
> ***(b) Procedures for promptly responding to individual requests for current charges for specific services/procedures; and***
>
> ***(c) Requirements for staff training to ensure that inquiries regarding charges for its services are appropriately handled.***

JHBMC states that it "…maintains a representative list of services and charges, which is accessible using a link on the JHBMC patient and visitor services webpage" and it is "available by request in written form" and "updated quarterly." Commission staff has confirmed the availability of a list of services and charges on the JHBMC website. Moreover, the applicant provided a copy of JHBMC's policy describing the list's maintenance procedure and training of staff. JHBMC complies with this standard.

> **(2) Charity Care Policy** ***Each hospital shall have a written policy for the provision of charity care for indigent patients to ensure access to services regardless of an individual's ability to pay.***
>
> ***(a) The policy shall provide:***
>
> ***(i) Determination of Probable Eligibility. Within two business days following a patient's request for charity care services, application for medical assistance, or both, the hospital must make a determination of probable eligibility.***
>
> ***(ii) Minimum Required Notice of Charity Care Policy.***
>
> ***1. Public notice of information regarding the hospital's charity care policy shall be distributed through methods designed to best reach the target population and in a format understandable by the target population on an annual basis;***
>
> ***2. Notices regarding the hospital's charity care policy shall be posted in the admissions office, business office, and emergency department areas within the hospital; and***
>
> ***3. Individual notice regarding the hospital's charity care policy shall be provided at the time of preadmission or admission to each person who seeks services in the hospital.***
>
> ***(b) A hospital with a level of charity care, defined as the percentage of total operating expenses that falls within the bottom quartile of all hospitals, as reported in the most recent Health Service Cost Review Commission Community Benefit Report, shall demonstrate that its level of charity care is appropriate to the needs of its service area population.***

JHBMC submitted a copy of its charity care policy and it complies with the requirements of this standard with respect to determinations of probable eligibility, public notice, and individual notice. For example, the policy is published annually in the Baltimore Sun and the applicant states that it is posted in the admissions and ED "and patient billing and financial assistance information is provided..in the Patient Handbook." However, while not required, Commission staff was unable to find JHBMC's charity care policy on its website and recommends that JHBMC assure that its policy can be easily accessed from its patient and visitors page.

JHBMC provided a copy of the reported charity care table from the FY2010 *Community Benefit Report* showed JHBMC to be in the top quartile of Maryland hospitals ranked by level of charity care provided; it ranked 11th among the state's 46 general hospitals, providing more than $21 million in charity care or 4.31% of its total operating expenses.

The applicant complies with this standard.

(3) Quality of Care

An acute care hospital shall provide high quality care.

(a) Each hospital shall document that it is:

(i) Licensed, in good standing, by the Maryland Department of Health and Mental Hygiene;

(ii) Accredited by the Joint Commission; and

(iii) In compliance with the conditions of participation of the Medicare and Medicaid programs.

(b) A hospital with a measure value for a Quality Measure included in the most recent update of the Maryland Hospital Performance Evaluation Guide that falls within the bottom quartile of all hospitals' reported performance measured for that Quality Measure and also falls below a 90% level of compliance with the Quality Measure, shall document each action it is taking to improve performance for that Quality Measure.

JHBMC documented its current licensure (expiration February 7, 2013) and accreditation status. It is accredited by the Joint Commission (November 7, 2009 for 39 months). JHBMC is in compliance with the conditions of participation of the Medicare and Medicaid programs.

Of the quality measures published by MHCC on its website, JHBMC's performance in 2010 fell in the bottom quartile and was less than 90% for the four measures shown below:

Table 12: JHBMC Bottom Quartile Performance on Quality Measures - 2010

Quality Measure	JHBMC Compliance Level (%*)	State Average Compliance Level (%)	JHBMC Rank	Number of Hospitals Reporting for this Measure (n)
Heart Failure (CHF)				
1. Discharge instructions	75	87	40	45
Pneumonia				
1. Antibiotics within 6 hours	89	95	42	45
2. Influenza vaccination status	80	90	38	44
3. Pneumococcal Vaccination	82	93	41	45

Source: Maryland Hospital Performance Guide, MHCC website and Appendix 7 of CON application (DI #2).

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JHBMC states that an electronic patient discharge instruction form was implemented which includes an import of the patient home medications from the Electronic Medical Record (EMR), allowing them to be copied by physicians and nurse practitioners into the discharge summary, making the two lists identical. In October, the discharge instructions and summary will be electronically integrated while ongoing auditing continues. Data provided for the first six months of 2011 show the percent compliance climbing to 91% in April and after falling to 82% in May, growing to 97% in June 2011.

Relative to the vaccines, a nurse driven protocol was implemented to facilitate vaccination. Ongoing follow-up audits were implemented with feedback to Clinical Specialists who retrain nurses who didn't complete the protocol correctly. Moreover, nurses who fail to correctly implement the protocol receive a communication from the Department of Quality. JHBMC reports dramatic improvement as a result of these efforts with pneumococcal and influenza vaccination compliance growing to 200% and more than 97%, respectively in March 2011, although pneumococcal fell to 83% in May 2011.

Ongoing concurrent review was implemented by the Department of Quality of patients presenting in the ED with pneumonia, which has helped to identify and correct documentation of diagnostic uncertainty in this patient population. Every time there is a failure in this core measure indictor, the Department of Quality provides communication to emergency department providers. Again, JHBMC reports excellent compliance. Data for the first six months of 2011 show dramatic improvement in compliance relative to the delivery of antibiotics for pneumonia within six hours.

Based on these efforts, JHBMC has complied with this standard.

COMAR 10.24.10.04B-Project Review Standards

(1) <u>Geographic Accessibility</u> *A new acute care general hospital or an acute care general hospital being replaced on a new site shall be located to optimize accessibility in terms of travel time for its likely service area population. Optimal travel time for general medical/surgical, intensive/critical care and pediatric services shall be within 30 minutes under normal driving conditions for 90 percent of the population in its likely service area.*

This standard is not applicable to this project. No new or replacement hospital is proposed.

(2) Identification of Bed Need and Addition of Beds

Only medical/surgical/gynecological/addictions ("MSGA") beds and pediatric beds identified as needed and/or currently licensed shall be developed at acute care general hospitals.

(a) Minimum and maximum need for MSGA and pediatric beds are determined using the need projection methodologies in Regulation .05 of this Chapter.

(b) Projected need for trauma unit, intensive care unit, critical care unit, progressive care unit, and care for AIDS patients is included in the MSGA need projection.

(c) Additional MSGA or pediatric beds may be developed or put into operation only if:

(i) The proposed additional beds will not cause the total bed capacity of the hospital to exceed the most recent annual calculation of licensed bed capacity for the hospital made pursuant to Health-General §19-307.2; or

(ii) The proposed additional beds do not exceed the minimum jurisdictional bed need projection adopted by the Commission and calculated using the bed need projection methodology in Regulation .05 of this Chapter; or

(iii) The proposed additional beds exceed the minimum jurisdictional bed need projection but do not exceed the maximum jurisdictional bed need projection adoFpted by the Commission and calculated using the bed need projection methodology in Regulation .05 of this Chapter and the applicant can demonstrate need at the applicant hospital for bed capacity that exceeds the minimum jurisdictional bed need projection; or

(iv) The number of proposed additional MSGA or pediatric beds may be derived through application of the projection methodology, assumptions, and targets contained in Regulation .05 of this Chapter, as applied to the service area of the hospital.

This standard does not apply to this project. No additional MSGA or pediatric beds are being requested by the applicant. JHBMC will be dedicating two MSGA beds for use by gynecology patients.

(3) Minimum Average Daily Census for Establishment of a Pediatric Unit

An acute care general hospital may establish a new pediatric service only if the projected average daily census of pediatric patients to be served by the hospital is at least five patients, unless:

(a) The hospital is located more than 30 minutes travel time under normal driving conditions from a hospital with a pediatric unit; or

(b) The hospital is the sole provider of acute care general hospital services in its jurisdiction.

This standard does not apply to this project. A new pediatric service is not being established. The project addresses the small average daily census (less than five patients) to which the pediatric inpatient service at JHBMC has fallen over time by creating a combined unit for handling ED, observation, and admitted patients.

(4) Adverse Impact

A capital project undertaken by a hospital shall not have an unwarranted adverse impact on hospital charges, availability of services, or access to services. The Commission will grant a Certificate of Need only if the hospital documents the following:

(a) If the hospital is seeking an increase in rates from the Health Services Cost Review Commission to account for the increase in capital costs associated with the proposed project and the hospital has a fully-adjusted Charge Per Case that exceeds the fully adjusted average Charge Per Case for its peer group, the hospital must document that its Debt to Capitalization ratio is below the average ratio for its peer group. In addition, if the project involves replacement of physical plant assets, the hospital must document that the age of the physical plant assets being replaced exceed the Average Age of Plant for its peer group or otherwise demonstrate why the physical plant assets require replacement in order to achieve the primary objectives of the project; and

(b) If the project reduces the potential availability or accessibility of a facility or service by eliminating, downsizing, or otherwise modifying a facility or service, the applicant shall document that each proposed change will not inappropriately diminish, for the population in the primary service area, the availability or accessibility to care, including access for the indigent and/or uninsured.

With respect to paragraph (a), JHBMC does not have a fully-adjusted charge per case that exceeds the fully adjusted average charge per case for its peer group. Staff does not find that this project involves the replacement of physical assets.

As for the requirements found in paragraph (b), Commission staff does not view the project as resulting in an inappropriate diminution of pediatric service capacity with significant negative implications for availability or accessibility. JHBMC is proposing to convert five licensed beds from pediatric to OB use. As discussed earlier in this report, JHBMC's pediatric unit currently operates at an average annual occupancy of approximately 25%. Based on JHBMC's projection of 1,012 pediatric patient days in FY2019 and a reduction to five licensed beds, it is projected that the average annual occupancy of the unit would be 55%. If JHBMC sees demand levels similar to that experienced in FY2012, bed availability would be challenging for some peak census days at JHBMC. However, the hybrid unit proposed provides some flexibility and its sister facility, The John Hopkins Hospital, has 144 pediatric beds and is geographically nearby. The project complies with this standard.

(5) Cost-Effectiveness

A proposed hospital capital project should represent the most cost effective approach to meeting the needs that the project seeks to address.

(a) To demonstrate cost effectiveness, an applicant shall identify each primary objective of its proposed project and shall identify at least two alternative approaches that it considered for achieving these primary objectives. For each approach, the hospital must:

(i) To the extent possible, quantify the level of effectiveness of each alternative in achieving each primary objective;

(ii) Detail the capital and operational cost estimates and projections developed by the hospital for each alternative; and

(iii) Explain the basis for choosing the proposed project and rejecting alternative approaches to achieving the project's objectives.

(b) An applicant proposing a project involving limited objectives, including, but not limited to, the introduction of a new single service, the expansion of capacity for a single service, or a project limited to renovation of an existing facility for purposes of modernization, may address the cost-effectiveness of the project without undertaking the analysis outlined in (a) above, by demonstrating that there is only one practical approach to achieving the project's objectives.

(c) An applicant proposing establishment of a new hospital or relocation of an existing hospital to a new site that is not within a Priority Funding Area as defined under Title 5, Subtitle 7B of the State Finance and Procurement Article of the Annotated Code of Maryland shall demonstrate:

(i) That it has considered, at a minimum, the two alternative project sites located within a Priority Funding Area that provide the most optimal geographic accessibility to the population in its likely service area, as defined in Project Review Standard (1);

(ii) That it has quantified, to the extent possible, the level of effectiveness, in terms of achieving primary project objectives, of implementing the proposed project at each alternative project site and at the proposed project site;

(iii) That it has detailed the capital and operational costs associated with implementing the project at each alternative project site and at the proposed project site, with a full accounting of the cost associated with transportation system and other public utility infrastructure costs; and

(iv) That the proposed project site is superior, in terms of cost-effectiveness, to the alternative project sites located within a Priority Funding Area.

Only paragraph (a) applies to this CON application.

JHBMC identified the primary objectives of this project to be:

- Improve adult ED capacity, facilities, throughput and patient experience;
- Improve pediatric ED and inpatient facilities, throughput, patient experience and cost-effectiveness; and
- Meet the needs of increasing volumes of observation patients.

Two alternative approaches were considered for achieving these primary objectives. The first alternative described was construction of a new building rather than a building addition to house an expanded emergency department, a new inpatient pediatric unit and observation spaces, and create more private patient rooms for adults. JHBMC indicates that extensive analysis was performed to determine the feasibility of developing a multi-level inpatient building that would be built adjacent to the existing FSK Pavilion. This project is estimated to cost in the $300M - $400M range to house a new emergency department, combined pediatric ED & inpatient unit, dedicated adult observation unit as well as create new medical/surgical private patient rooms (currently 81 of the 215 MSGA licensed beds are not private). A ten-year financial model was developed to forecast the use and sources of funding and the impact of increased facility and operating expenses. While this alternative would meet all the primary objectives, a significant increase in philanthropy, debt capacity and operating cash would be required before this project

could be initiated. This alternative would also require a five to seven-year time period for planning, approvals, design and construction, and, thus, would be an untimely solution to the immediate operational challenges in JHBMC's emergency department.

The second alternative considered was construction of a 20,000 SF north ED annex to house expanded ED and pediatric space, and expand inpatient acute care bed capacity which would continue the distribution of observation patients to medical/surgical patient units. This smaller footprint alternative (North ED Annex) has a lower capital cost estimate ($20M-$25 million), but does not address the significant increase of observation cases treated at JHBMC. Today the observation cases are distributed among the medicine and surgical inpatient units, which JHBMC does not consider to be a cost effective operating model. It also states that this causes congestion for inpatient beds. Lack of available inpatient beds causes longer ED length of stay, as patients' board in the emergency department waiting for a bed. According to JHBMC, construction logistics for this alternative would also be more difficult with respect to maintaining operations in the current ED. The construction would occur directly adjacent to the functioning ED, whereas, with the proposed scheme, the new construction will be completed first and the ED can use the new space while other areas of the existing ED are being renovated. The North Annex also did not allow the most desirable patient flow, adjacency of spaces and reuse of existing space.

The hospital has met the requirements of this standard.

(6) Burden of Proof Regarding Need

A hospital project shall be approved only if there is demonstrable need. The burden of demonstrating need for a service not covered by Regulation .05 of this Chapter or by another chapter of the State Health Plan, including a service for which need is not separately projected, rests with the applicant.

State Health Plan standards in COMAR 10.24.10 are applicable to the ED and pediatric bed components of the proposed project. The State Health Plan does not include a bed need methodology for obstetric beds that is applicable to a project of this type.

JHBMC provided information regarding the need for additional observation space. Using the 140 percent bed rule used in acute care bed licensure, the 13-bed ED observation unit is justified by JHBMC on the basis of its current ED observation experience.

(7) Construction Cost of Hospital Space

The proposed cost of a hospital construction project shall be reasonable and consistent with current industry cost experience in Maryland. The projected cost per square foot of a hospital construction project or renovation project shall be compared to the benchmark cost of good quality Class A hospital construction given in the Marshall Valuation Service® guide, updated using Marshall Valuation Service® update multipliers, and adjusted as shown in the Marshall Valuation Service® guide as necessary for site terrain, number of building levels, geographic locality, and other listed factors. If the projected cost per square foot exceeds the

Marshall Valuation Service® benchmark cost, any rate increase proposed by the hospital related to the capital cost of the project shall not include the amount of the projected construction cost that exceeds the Marshall Valuation Service® benchmark and those portions of the contingency allowance, inflation allowance, and capitalized construction interest expenditure that are based on the excess construction cost.

This standard requires a comparison of the project's estimated new construction and renovation cost with an index cost derived from Marshall Valuation Service ("MVS") guidelines for new construction. Staff evaluated the project costs, as they would be appropriately adjusted for comparison with an MVS benchmark cost and this evaluation is summarized in the following table.

Table 13: Construction Cost Analysis
Johns Hopkins Bayview Medical Center

	New Construction	Renovation	Total
Building	$20,939,628.00	$3,066,789.00	$24,006,417.00
Normal Site Preparation	$1,265,000.00	$0.00	$1,265,000.00
Architect/Engineering Fees	$1,778,983.00	$615,635.00	$2,394,618.00
Permits	$105,224.00	$15,411.00	$120,635.00
Capitalized Construction Interest	$1,975,080.57	$303,191.17	$2,278,271.74
Total Project Costs	$26,063,915.57	$4,001,026.17	$30,064,941.74
Total Adjustments	$2,661,167.92	$238,447.13	$2,899,615.05
Net Project Costs	$23,402,747.65	$3,762,579.04	$27,165,326.69
Square Footage	53,970	18,740	72,710
Cost Per Square Foot	$433.63	$200.78	
Adj. MVS Cost/Square Foot	$371.12	$325.12	
Over(Under)	$32.75	-$124.34	
Excess (Under)	$1,767,613	-$2,330,208	-$562,595

Source: Submission dated 10/26/2011, Project Budget; MVS Analysis (DI #15)

The standard requires that any rate increase proposed by the hospital related to the capital cost of the project shall not include the amount of project construction costs that exceeds the MVS benchmark and those portions of the contingency allowance, inflation allowance and capital construction interest that are based on the excess construction. In this case, while the new construction component has an adjusted cost estimate that exceeds the MVS benchmark, on a combined basis, the new construction and renovation components do not, in the aggregate, result in construction/renovation costs that are excessive.

(8) <u>Construction Cost of Non-Hospital Space</u>

The proposed construction costs of non-hospital space shall be reasonable and in line with current industry cost experience. The projected cost per square foot of non-hospital space shall be compared to the benchmark cost of good quality Class A construction given in the Marshall Valuation Service® guide for the appropriate structure. If the projected cost per square foot exceeds the Marshall Valuation Service® benchmark cost, any rate increase proposed by the hospital related to the capital cost of the non-hospital space shall not include the amount of the projected construction cost that exceeds the Marshall Valuation Service® benchmark and those portions of the contingency allowance, inflation allowance, and

capitalized construction interest expenditure that are based on the excess construction cost. In general, rate increases authorized for hospitals should not recognize the costs associated with construction of non-hospital space.

This standard is not applicable to this project. Construction of non-hospital space is not proposed by JHBMC.

(9) Inpatient Nursing Unit Space

Space built or renovated for inpatient nursing units that exceeds reasonable space standards per bed for the type of unit being developed shall not be recognized in a rate adjustment. If the Inpatient Unit Program Space per bed of a new or modified inpatient nursing unit exceeds 500 square feet per bed, any rate increase proposed by the hospital related to the capital cost of the project shall not include the amount of the projected construction cost for the space that exceeds the per bed square footage limitation in this standard or those portions of the contingency allowance, inflation allowance, and capitalized construction interest expenditure that are based on the excess space.

As reported by JHBMC, the calculated inpatient unit program space per bed for the five inpatient beds in the combined pediatric inpatient/ED/observation unit is 498 square feet per bed (2,490 total square feet) and for the expansion of OB beds, 450 square feet per bed (3,150 total square feet). The project complies with this standard.

(10) Rate Reduction Agreement

A high-charge hospital will not be granted a Certificate of Need to establish a new acute care service, or to construct, renovate, upgrade, expand, or modernize acute care facilities, including support and ancillary facilities, unless it has first agreed to enter into a rate reduction agreement with the Health Services Cost Review Commission, or the Health Services Cost Review Commission has determined that a rate reduction agreement is not necessary.

This standard is not applicable. JHBMC is not a high-charge hospital. The HSCRC 2010 Reasonableness of Charges Comparison report found that JHBMC's charge per case was approximately 1% below (0.94%) the average charge per case for its Peer Group (Peer Group 4 – Urban Hospitals).

(11) Efficiency

A hospital shall be designed to operate efficiently. Hospitals proposing to replace or expand diagnostic or treatment facilities and services shall:

(a) Provide an analysis of each change in operational efficiency projected for each diagnostic or treatment facility and service being replaced or expanded, and document the manner in which the planning and design of the project took efficiency improvements into account; and

(b) Demonstrate that the proposed project will improve operational efficiency when the

proposed replacement or expanded diagnostic or treatment facilities and services are projected to experience increases in the volume of services delivered; or

(c) Demonstrate why improvements in operational efficiency cannot be achieved.

The applicant states that improving operating efficiency is an ongoing initiative. JHBMC presented the following table that shows the direct expense per Emergency Department relative value unit ("RVU") decreasing 5.7% from FY07 to FY10, thus decreasing the delivery cost per ED patient visit.

Table 14

HSCRC Annual Filing M Schedule

JHBMC EMG Rate Center

FY	UNITS OF MEASURE (RVUs)	DIRECT EXPENSES (000's)	DirExp Per RVU
2007	376,123	$10,833	$28.80
2008	439,039	$12,364	$28.16
2009	624,329	$16,065	$25.73
2010*	591,447	$14,135	$23.90

*2010 observation RVUs and associated expense not included in ED.

The applicant states that additional efficiencies will be gained with initiatives supported by the new facility design related to patient segmentation and provider forward (explained in the review of ED standards below). Patient segmentation is a clinically synchronized approach that will minimize activities that are not of value to the patient. Specifically, nurse and provider will take a history together, so that the patient does not have to tell his or her story to multiple clinical personnel, and everyone, including the patient is on the same page. The main goal of segmentation is to serve the patient without significant wait times by decreasing over processing of information, order tests as needed, and quickly determine a disposition for the patient.

Through this process, JHBMC will experience a lower throughput time for emergency department patients, especially on the front-end as patients enter the ED. In the fiscal year ending June, 2011, the average time from entering the emergency department to the time the patient was assigned a room was nearly 2 hours for the Main ED and nearly 1.5 hours for the Minor Care Adult unit. Through this process, the goal is to reduce the time it takes to see a provider from 1.5 - 2 hours to less than half hour (0.5 hours) for most patients. To test this, a segmentation pilot was conducted for two shifts at the end of June 2011 in anticipation of a new ED Annex. In this segmentation pilot, a provider and nurse team were added to the Minor Care team and used an adjacent waiting area where patients could wait for test results after being seen and thereby free up treatment space for the next patient to be evaluated. The focus was on evaluation and

treatment of the ESI 3 population - a patient segment that does not normally go to the Minor Care area.

Patients who do not complete care by seeing a provider are considered "walk out" or "Left Without Being Seen" (“LWBS”). The majority of these walk outs are ESI level 3 patients (a measure of acuity or care intensity) and the average wait time before leaving is typically 4 hours. As improved segmentation processes are implemented, the goal is to reduce the number of people waiting a long time before being seen by a provider. This will reduce the number of walk outs and increase the number of patients who complete their care. Hospitals that do segmentation well have experienced walk out rates as low as 1 % of registrations or less, a viable goal upon completion of the new ED Annex with added treatment capacity. In FY10, the walk out rate was 6.7% of registered patients, and through initial segmentation efforts and reduction of treatment times the walkout rate was reduced to 5.95%.The current ED goal is to reduce the LWBS rate to 4.5%, and after the ED Annex project completion the goal is to achieve a rate that is <1 % (1-2 people per day or less).

The JHBMC ED has worked on hospital capacity with the goal of reducing diversion hours or yellow alerts, as discussed in III.B. of this report. The applicant proposes that the segmentation process will improve throughput time, thereby reducing the number of walk outs, reduce diversion times and allow the emergency department to increase its visits per treatment bed. The increased volumes will spread fixed costs over a larger base of patient visits and will therefore further decrease the cost per patient visit.

The collocation of pediatric inpatient, pediatric observation and pediatric emergency department treatment rooms allows for care to be fully delivered by pediatric nurses to pediatric patients. Currently in the emergency department, pediatric patients are not afforded the expertise of pediatric nurses. In the new Combined Pediatric Unit, the pediatrician will work with a smaller cohort of nurses that will result in better team function resulting in enhanced clinical quality and patient satisfaction.

Staffing efficiencies will improve with the new combined pediatric unit. Currently the pediatric inpatient unit nursing staffing is based on a minimum staffing of 2.0 FTEs even though the census at times is below the 2.0 FTE level. In the new combined unit, inpatient nursing will be collocated with the pediatric emergency staffing and therefore lowered to 1.0 FTE unless inpatient census becomes greater than 5 patients. Collocation allows for smaller cohort of nurses to create a more cohesive pediatric team. There will also be savings as a result of pediatric competency training and improved retention of pediatric trained employees. Finally, consolidating the majority of the pediatric patients to one unit will improve supply and equipment costs, as it reduces the inventory and duplication of supplies and equipment in multiple units.

The applicant has adequately demonstrated that the project will achieve operational efficiencies. The project is consistent with this standard.

(12) Patient Safety

The design of a hospital project shall take patient safety into consideration and shall include design features that enhance and improve patient safety. A hospital proposing to replace or expand its physical plant shall provide an analysis of patient safety features included for each facility or service being replaced or expanded, and document the manner in which the planning and design of the project took patient safety into account.

The applicant outlined design and operational characteristics incorporated in its proposed project that will have a positive impact on patient safety, as summarized in the following:

- The ED design supports the "First Look" and "Provider Forward" models, allowing patients to be triaged and immediately moved to an appropriate treatment area.
- New dedicated resuscitation rooms right within the ambulance entrance, reserved for stabilizing patients prior to transferring them to other treatment space.
- Increased ED critical care treatment rooms to accommodate patients with the highest acuity.
- Standardization of headwall configuration in patient rooms.
- Infection control precautions with enclosed ED treatment rooms and hand washing sinks and waterless hand disinfectants throughout.
- A new decontamination room with an outside entrance from the ambulance bays and a hot zone and cold zone to contain the risks.
- Acoustical treatments to dampen and dissipate noise to reduce staff distractions and stress.
- Computerized patient information systems standardization and easily accessible to staff.

The applicant has demonstrated that design of its project took patient safety into consideration and that it includes features that enhance and improve patient safety, consistent with this standard.

(13) Financial Feasibility

A hospital capital project shall be financially feasible and shall not jeopardize the long-term financial viability of the hospital.

(a) Financial projections filed as part of a hospital Certificate of Need application must be accompanied by a statement containing each assumption used to develop the projections.

(b) Each applicant must document that:

(i) Utilization projections are consistent with observed historic trends in use of the

applicable service(s) by the service area population of the hospital or State Health Plan need projections, if relevant;
(ii) Revenue estimates are consistent with utilization projections and are based on current charge levels, rates of reimbursement, contractual adjustments and discounts, bad debt, and charity care provision, as experienced by the applicant hospital or, if a new hospital, the recent experience of other similar hospitals;
(iii) Staffing and overall expense projections are consistent with utilization projections and are based on current expenditure levels and reasonably anticipated future staffing levels as experienced by the applicant hospital, or, if a new hospital, the recent experience of other similar hospitals; and
(iv) The hospital will generate excess revenues over total expenses (including debt service expenses and plant and equipment depreciation), if utilization forecasts are achieved for the specific services affected by the project within five years or less of initiating operations with the exception that a hospital may receive a Certificate of Need for a project that does not generate excess revenues over total expenses even if utilization forecasts are achieved for the services affected by the project when the hospital can demonstrate that overall hospital financial performance will be positive and that the services will benefit the hospital's primary service area population.

The applicant states that its financial projections were calculated as part of a detailed financial projection for the entire acute care component of the hospital, utilizing a long-range financial planning model developed by KPMG. The JHBMC/KPMG planning model uses projected inpatient discharges and case mix index, outpatient volumes by HSCRC rate center, and current JHBMC HSCRC rates to project revenue. Projected equivalent inpatient admissions (EIPAs) and current expense per EIPA are used to project operating expenses. Capital and debt expenses are projected separately based on assumed capital expenditures and debt financings.

Key FY 2013 - 2019 Financial Projection Assumptions:

1. Revenues:

a. Gross revenue based on current estimated FY 2012 HSCRC rates applied to projected volumes.
b. Inflation:
- HSCRC update factor 2.00% FY13-15
- HSCRC update factor 2.50% FY16-18
- HSCRC update factor 2.75% FY19
- Other operating revenues 3.00%

c. Current HSCRC 15% reductions for fixed costs on incremental inpatient and outpatient revenue continues.
d. Current FY 2012 budgeted revenue deductions for regulatory allowances, bad debt and charity care percentages applied to gross revenue.
e. No change in other operating revenue, except 3.00% inflation on the updated Table 3 and no inflation on original Table 3 submitted.

2. Expenses
   a. 3.0% inflation on the updated Table 3 and no inflation on original Table 3 submitted.
   b. Expense is 70% variable with volume and Case Mix Index changes.
   c. Bond issuance assumes a 30 year fixed rate of 5.45%.
   d. Debt financing costs estimated to be 0.6% of bond size.

(b) Each applicant must document that:
(i) Utilization projections are consistent with observed historic trends in use of the applicable service(s) by the service area population of the hospital or State Health Plan need projections, if relevant;
(ii) Revenue estimates are consistent with utilization projections and are based on current charge levels, rates of reimbursement, contractual adjustments and discounts, bad debt, and charity care provision, as experienced by the applicant hospital or, if a new hospital, the recent experience of other similar hospitals;
(iii) Staffing and overall expense projections are consistent with utilization projections and are based on current expenditure levels and reasonably anticipated future staffing levels as experienced by the applicant hospital, or, if a new hospital, the recent experience of other similar hospitals; and
(iv) The hospital will generate excess revenues over total expenses (including debt service expenses and plant and equipment depreciation), if utilization forecasts are achieved for the specific services affected by the project within five years or less of initiating operations with the exception that a hospital may receive a Certificate of Need for a project that does not generate excess revenues over total expenses even if utilization forecasts are achieved for the services affected by the project when the hospital can demonstrate that overall hospital financial performance will be positive and that the services will benefit the hospital's primary service area population.

With respect to subsection (i), the applicant states that over the past five years, JHBMC ED visits have increased at an average annual rate of 2.2%, and have plateaued at about 60,000 visits per year since FY2009. With completion of the ED expansion, visits are projected to grow at an average annual rate of 1.5% from FY2011 to FY2019, which is consistent with historic trends. Inpatient admissions from the ED are projected to continue at the current 22% of ED visits, and experience similar utilization patterns. Non-ED admissions are projected by individual service, but decrease slightly overall, going from 8,386 in 2012 to 8,094 in 2019, due to forecasted shift of inpatient chemical dependency services to the outpatient setting.

Clinic visits are projected to increase 2.3% per year, which was the average annual growth rate from 2006 through 2011.

In summary, ED use projections are consistent with observed historic trends and JHBMC, like most Maryland hospitals, has experienced a recent substantial increase in the need for observation bed capacity. These are the service capacities being expanded through this project.

With respect to subsection (ii), JHBMC specified that revenue is projected based on the estimated FY 2012 HSCRC rates with current adjustments, discounts, bad debt and charity care. Changes in its case mix index due to projected changes in inpatient service volume mix are also taken into account. Revenue projections are consistent with utilization projections.

With respect to subsection (iii), expenses are projected based on the current FY 2012 budgeted expenses, adjusted for volume changes and the incremental staffing changes related to this project, provided as part of the application.

With respect to subsection (iv), JHBMC has generated net income historically and projects a continued ability to do so. Isolating on the revenues and expenses associated with this project (primarily ED services), the hospital projects cumulative losses of approximately $2.5 million in the first two years following project completion but generation of income by Year 3 and thereafter.

The applicant has demonstrated the financial feasibility of the project, under the terms of this standard. A preliminary positive opinion with respect to financial feasibility has been communicated by HSCRC staff. Its written opinion was not available at the time of posting of this report.

(14) <u>Emergency Department Treatment Capacity and Space</u>

(a) An applicant proposing a new or expanded emergency department shall classify service as low range or high range based on the parameters in the most recent edition of Emergency Department Design: A Practical Guide to Planning for the Future from the American College of Emergency Physicians. The number of emergency department treatment spaces and the departmental space proposed by the applicant shall be consistent with the range set forth in the most recent edition of the American College of Emergency Physicians Emergency Department Design: A Practical Guide to Planning for the Future, given the classification of the emergency department as low or high range and the projected emergency department visit volume.
(b) In developing projections of emergency department visit volume, the applicant shall consider, at a minimum:
(i) The existing and projected primary service areas of the hospital, historic trends in emergency department utilization at the hospital, and the number of hospital emergency department service providers in the applicant hospital's primary service areas;
(ii) The number of uninsured, underinsured, indigent, and otherwise underserved patients in the applicant's primary service area and the impact of these patient groups on emergency department use;
(iii) Any demographic or health service utilization data and/or analyses that support the need for the proposed project;
(iv) The impact of efforts the applicant has made or will make to divert non-emergency cases from its emergency department to more appropriate primary care or urgent care settings; and
(v) Any other relevant information on the unmet need for emergency department or urgent care services in the service area.

This project proposes to expand adult ED services at JHBMC from 36 to 43 treatment spaces and the pediatric ED from 4 to 5 treatment spaces. In total, JHBMC proposes a combined

ED service expanding from 40 to 48 treatment spaces.

With respect to paragraph (a), the applicant is asked to classify itself as either a low range or high range ED based on the parameters set forth in the guidelines found in the most recent publication, *Emergency Department Design: A Practical Guide to Planning for the Future*. Staff believes that the weight of the assessment of the factors used to classify an ED as Low or High, considered in their totality, generally would place the JHBMC ED in the High Range. JHBMC explains that the acuity mix of its patients (62% urgent) and the large numbers of psychiatric patients and uninsured and high-risk populations that reside in Baltimore City make it impossible for the hospital to achieve the low range for ACEP throughput parameters.

The following table summarizes the *EDD* range indicators and JHBMC's position relative to the indicators based on FY11 data/information provided by the applicant.

Table 15: *Emergency Department Design: A Practical Guide to Planning for the Future* – Threshold Indicators for JHBMC ED

Indicators for Adult ED	Low Range Threshold	High Range Threshold	Current JHBMC
ALOS	<2.5 hours	>3.5 hours	4.75 hours
Location of Observation Beds	Outside ED	Inside ED	Inside ED
Time to Admit	<60 minutes	>90 minutes	155 minutes
Turnaround Time Dx Tests	<31 minutes	>60 minutes	>30 minutes
% Admitted Patients	<18%	>23%	21.7%
% Non-Urgent/ % Urgent	>1.1/1	>1/1.1	1 /1.66
Age of Patient	<20% Age 65+	>25% Age 65+	15%
Admin/Teaching Space	Minimal	Extensive	Minimal
Imaging within ED	No	Yes	Yes
Specialty Components	No	Yes	Yes – psych & peds
Flight/Trauma Services	No	Yes	Yes

Sources: Emergency Department Design: A Practical Guide to Planning for the Future, Huddy, J., American College of Emergency Physicians, Dallas, TX, 2002. And CON application, pages 48-49

With respect to Part (b) of this standard, the projection by JHBMC of 66,389 ED treatment visits by 2019 is reasonable. As discussed in III.B. of this report, JHBMC has experienced an average annual increase of 2.2% over the last four years, while the region's increase has been 1.6%. Its projections are based on an average annual growth rate of 1.7% going forward which is a result of a period of no growth due to capacity constraints followed by a period of 2% growth. The following table summarizes JHBMC's efforts in supporting this projection as a starting point for consideration of this standard.

Table 16: JHBMC Projection of ED Demand
Required Considerations from SHP Standard and Responses

Standard Element	Applicant Response
(i)-existing and projected PSA of hospital *-historic trends in ED utilization* *-number of ED providers in the applicant's PSA*	Applicant provided analysis of PSA socio-demographic trends in its CON application and follow-up, as well as information regarding Mass. Experience following health reform on ED utilization .
(ii)-number of uninsured, underinsured, indigent, and otherwise underserved patients in the applicant's PSA and the impact of these patient groups on ED use	Applicant provided the percentage of self-pay patient encounters for the facility currently (9%) and the projected ED self-pay patient encounters (28%) following project completion.
(iii)-any demographic or health service utilization data and/or analyses that support the need for the project	Applicant referenced yellow and red alert hours in its application.
(iv)- The impact of efforts the applicant has made or will make to divert non-emergency cases from its emergency department to more appropriate primary care or urgent care settings; and	Applicant detailed process improvements including the development of a Patient First urgent care center on its campus, establishing a "Help Desk" with the Access Partnership of John Hopkins Medicine, and effective management of emergency department capacity such as triage initiatives and its Fast Track mobile trailer.
(v)- Any other relevant information on the unmet need for emergency department or urgent care services in the service area.	JHBMC detailed its efforts to reduce the number of patients leaving without being seen (LWBS) and improving patient satisfaction.

Sources: CON application and SHP

Emergency Department Design: A Practical Guide to Planning for the Future ("*EDD*") contains the following range of departmental gross square feet ("DGSF") and treatment spaces for an ED with 60,000 and 70,000 annual visits, the visit thresholds closest to JHBMC's out year projection and the table also identifies the floor space and treatment spaces proposed by JHBMC in this project. Because JHBMC only provided the breakout of projected adult and pediatric visits through FY2017 in its application, the following analyses are based on the FY2017 projections.

Table 17: EED SF and Treatment Space Ranges for an 60-70K ED and
JHBMC Proposed SF and Treatment Spaces

	Departmental Gross Square Feet		Treatment Spaces	
	Low Range	High Range	Low Range	High Range
60,000 visit ED	29,750	39,950	35	47
70,000 visit ED	33,000	44,550	40	54
JHBMC Proposed (63,811 ED Visits projected in 2017)	42,677		48	

Sources: Emergency Department Design: A Practical Guide to Planning for the Future, Huddy, J., American College of Emergency Physicians, Dallas, TX, 2002 and CON Application, p. 10

JHBMC has proposed floor space and treatment spaces that are within the indicated range for its projected utilization but quite generous based on the *EDD* standards. Because the adult and pediatric ED spaces will be physically remote from each other, the following analyzes the proposal for each ED based on the *EDD* standards:

Table 18: EED SF and Treatment Space Ranges for a 10K ED and JHBMC Proposed Pediatric ED SF and Treatment Spaces

	Departmental Gross Square Feet		Treatment Spaces	
	Low Range	High Range	Low Range	High Range
10,000 visit ED	7,200	9,900	8	11
JHBMC Proposed (8,537 ED Visits projected in 2017)	6,348		5	

Sources: Emergency Department Design: A Practical Guide to Planning for the Future, Huddy, J., American College of Emergency Physicians, Dallas, TX, 2002 and CON Application, p. 10

While JHBMC's pediatric ED does not meet the minimal square feet and treatment spaces, it is not a freestanding ED and will continue to receive backup and support from the adult or main ED.

Table 19: EED SF and Treatment Space Ranges for an 60-70K ED and JHBMC Proposed SF and Treatment Spaces

	Departmental Gross Square Feet		Treatment Spaces	
	Low Range	High Range	Low Range	High Range
50,000 visit ED	25,500	34,000	30	40
60,000 visit ED	29,750	39,950	35	47
JHBMC Proposed (55,274 ED Visits projected in 2017)	36,329		43	

Sources: Emergency Department Design: A Practical Guide to Planning for the Future, Huddy, J., American College of Emergency Physicians, Dallas, TX, 2002 and CON Application, p. 10

JHBMC's adult ED's proposed floor space and treatment spaces again are within the indicated range for its projected utilization, although generous, based on the *EDD* standards. Given the variability of ED volumes based on changing environmental factors, this leeway appears to be warranted. On that basis, we recommend that the project design be found to be consistent with this standard.

(15) Emergency Department Expansion

A hospital proposing expansion of emergency department treatment capacity shall demonstrate that it has made appropriate efforts, consistent with federal and state law, to maximize effective use of existing capacity for emergent medical needs and has appropriately integrated emergency department planning with planning for bed capacity, and diagnostic and treatment service capacity. At a minimum:

(a) The applicant hospital must demonstrate that, in cooperation with its medical staff, it has attempted to reduce use of its emergency department for non-emergency medical care. This demonstration shall, at a minimum, address the feasibility of reducing or redirecting patients with non-emergent illnesses, injuries, and conditions, to lower cost alternative facilities or programs;

(b) The applicant hospital must demonstrate that it has effectively managed its existing emergency department treatment capacity to maximize use; and

(c) The applicant hospital must demonstrate that it has considered the need for bed and other facility and system capacity that will be affected by greater volumes of emergency department patients.

The following actions were reported by JHBMC as efforts taken to maximize effective use of existing ED capacity for emergent medical needs.

- In 2000, JHBMC opened 8 "Fast Track" beds and redesigned the vacated Fast Track space for psychiatric evaluation, which was later expanded from four to six spaces.

- In 2003, it established an Emergency Department and Hospital Capacity Committee and a weekly roundtable group of ED and Medicine physicians, nursing leadership, and case management to establish alert guidelines and criteria for bed management, among other issues.

- In 2006, JHBMC established a program of Active Bed Management to help mitigate ED bottlenecks and improve ED throughput.

- In 2007, a Patient First urgent care center was established on the JHBMC campus. This facility is currently seeing an average of 136 patients per day.

- In 2010, a First Look & Provider Forward pilot in the reception area of the ED. Patients are triaged while registering and is staffed by both a nurse and registration staff member. Some patients are rapidly evaluated and admitted directly to an inpatient bed from the reception area.

- In 2010, a new 38-bed unit for medical acute patients was opened (the Bridgeview Medical Unit). These additional private rooms have assisted in improving ED throughput but increased volumes have diminished its effect.

As previously noted, JHBMC has reported some success in reducing red and yellow alert hours over the last decade but their ability to further reduce diversion hours appears to have "flattened out" perhaps at least partly due to the facility's higher than average number of ED visits per treatment space. Based on reported efforts taken to date, the project is consistent with this standard.

(16) <u>Shell Space</u>

Unfinished hospital space for which there is no immediate need or use, known as "shell space," shall not be built unless the applicant can demonstrate that construction of the shell space is cost effective. If the proposed shell space is not supporting finished building space being constructed above the shell space, the applicant shall provide an analysis demonstrating that constructing the space in the proposed time frame has a positive net present value that considers the most likely use identified by the hospital for the unfinished space and the time frame projected for finishing the space. The applicant shall demonstrate that the hospital is likely to need the space for the most likely identified use in the projected time frame. Shell space being constructed on lower floors of a building addition that supports finished building space on upper floors does not require a net present value analysis. Applicants shall provide information on the cost, the most likely uses, and the likely time

frame for using such shell space. The cost of shell space included in an approved project and those portions of the contingency allowance, inflation allowance, and capitalized construction interest expenditure that are based on the construction cost of the shell space will be excluded from consideration in any rate adjustment by the Health Service Cost Review Commission.

This standard is not applicable. The project does not propose construction of shell space.

B. Need

COMAR 10.24.01.08G(3)(b) Need.
The Commission shall consider the applicable need analysis in the State Health Plan. If no State Health Plan need analysis is applicable, the Commission shall consider whether the applicant has demonstrated unmet needs of the population to be served, and established that the proposed project meets those needs.

Emergency Department

As previously detailed in this report, under the applicable SHP standards addressing ED expansion, MHCC staff believes that JHBMC has justified its proposed expansion of ED facilities. Its ED visit growth rate and number of visits per treatment space exceeded the regional comparisons and its proposed floor space and treatment spaces for ED services is within the range outlined in the SHP. The socio-economic status of the residents in its PSA is likely to continue to be relatively less affluent – translating into lower levels of health insurance coverage, a tendency to use EDs for non-emergent care, and patients with higher acuity related to delays in treatment. The applicant has justified that even with health reform that pattern is likely to continue due to provider shortages and traditional patterns of health care utilization.

Pediatric Inpatient/ED Combined Unit

As previously discussed, the bed space for the five inpatient pediatric beds is within SHP criteria and while the pediatric ED square footage and treatment space is below the minimal SHP criteria, they are reasonable given that the main ED will be triaging all patients and supporting the pediatric ED, as needed. Observation space within the combined unit will allow patients to benefit from specialized pediatric professionals and provide a better environment for children and their parents. Also, the collocation of pediatric inpatient and observational beds will allow the greater flexibility needed by a relatively small inpatient unit. Moreover, by moving from A2 Center, the pediatric room relocation will allow the construction of NICU transitional space for parents to sleep-in.

Observation/Holding Beds

The State Health Plan does not contain a need standard for observation/holding beds. JHBMC is proposing to concentrate patients in a dedicated unit as an alternative to its current practice of scattering such patients among available licensed bed space. Given the applicant's increase in the need for observation bed capacity, the proposed project is a reasonable approach to allowing JHBMC to better concentrate use of its licensed bed capacity for the intended

purpose of accommodating admitted patients and may allow for more efficient and/or effective care delivery to observation patients.

Obstetrical Beds

JHBMC is swapping pediatric bed capacity for OB bed capacity without increasing bed capacity. The SHP does not contain a bed need standard for OB beds. Using a traditional approach for evaluating OB bed need, based on an assumption that OB patient census approximates a cumulative normal distribution, JHBMC's 2010 OB census would need 18 beds to assure bed availability on 95% of days. It currently has 17 beds. With 21 beds, using this assumption, it would be able to accommodate patient demand on 99% of days. It is proposing a bed capacity of 22. While this indicates that bed availability is not significantly compromised at the hospital's current capacity, especially given the ability of OB services to run at higher average occupancy rates than the cumulative normal distribution would indicate, due to greater scheduling potential in this service, as currently practiced, in the context of this project, given the space adjacencies being exploited in replacing old pediatric unit space with new OB space, there is no compelling basis for denying this aspect of the proposed project, on the basis of bed need considerations.

C. Availability of More Cost-Effective Alternatives

COMAR 10.24.01.08G(3)(c)Availability of More Cost-Effective Alternatives.
The Commission shall compare the cost effectiveness of the proposed project with the cost effectiveness of providing the service through alternative existing facilities, or through an alternative facility that has submitted a competitive application as part of a comparative review.

As previously outlined in the discussion of COMAR 10.24.10.04(B) (5), the Project Review Standard for Cost-Effectiveness, the applicant described its operational objectives and the project alternatives considered, including the reasons for their rejection in favor of the proposed project. The criteria used to assess alternatives included factors affecting capital cost, scheduling, and operational staging issues. Maintenance of the status quo does not appear to be a viable alternative with the growth in ED volume and the space available in the current ED. Commission Staff concluded that the applicant conducted a reasonably thorough assessment of design alternatives and selected the best overall option for meeting its key objectives. The proposed project is a cost-effective approach to expanding ED facilities at JHBMC, reconfiguring pediatric services to garner operational efficiencies and expanding observation/holding beds to care for higher acuity patients while complying with payer reimbursement policies.

D. Viability of the Proposal

COMAR 10.24.01.08G(3)(d) states "The Commission shall consider the availability of financial and nonfinancial resources, including community support, necessary to implement the project within the time frames set forth in the Commission's performance requirements, as well as the availability of resources necessary to sustain the project."

The Johns Hopkins Bayview Medical Center ("JHBMC") proposes to expand total emergency department (ED) treatment spaces from 40 to 48, relocate its pediatric unit, create adult and pediatric observation and holding spaces, and convert the vacated pediatric unit into expanded obstetrics and gynecology inpatient space. This project will decrease the number of pediatric licensed beds by half (five beds) and increase the number of obstetrical licensed beds by five, from 17 to 22 beds. Two medical surgical beds will be dedicated for gynecological cases.

Table 20: Estimated Project Budget
Johns Hopkins Bayview Medical Center

A. Use of Funds	
1. Capital Costs	
a. New Construction	
(1) Building	$19,989,628
(4) Site Preparation	2215000
(5) Professional Fees	1,778,983
(6) Permits	105,224
SUBTOTAL	**$24,088,835**
b. Renovations	
(1) Building	$3,066,789
(3) Architect/Engineering Fees	615,635
(4) Permits	15,411
SUBTOTAL	**$3,697,835**
c. Other Capital Costs	
(1) Major Movable Equipment	$2,129,820
(2) Minor Movable Equipment	1,419,880
(3) Contingencies	2,342,765
(4) Other (Specify)	1,727,010
SUBTOTAL	$7,619,475
Total Current Capital Costs	$35,406,145
d. Inflation	$1,218,855
e. Capitalized Construction Interest	$3,034,972
TOTAL PROPOSED CAPITAL COSTS	**$39,659,972**
Financing Cost and Other Cash Requirements	
Loan Placement Fee	$216,810
Legal Fees (other)	75,765
Printing	,1212
CON Application Assist.	38,451
Other	106,679
SUBTOTAL	**$438,917**
TOTAL USES OF FUNDS	**40,098,889**
B. Sources of Funds For Project	
1. Cash	$10,071,248
2. Authorized Bonds	29,700,000
3. Interest Income (Gross)	327,641
TOTAL SOURCES OF FUNDS	**$40,098,889**

Source: Submission dated 9/26,2011 (DI #16), Project Budget

The total estimated capital cost of the project is $39,659,972, with additional financing costs and cash requirements of $438,917; this results in a total project cost of $40,098,889. JHBMC proposes to finance the project with a cash contribution of $10,071,248, authorized bonds in the amount of $29,700,000 and Interest Income of $327,641.

Availability of Financial Resources

Staff reviewed the audited financial statements, which include the accounts of the acute care hospital, the Johns Hopkins Bayview Care Center, restricted gifts and grants programs, and other specialty programs. The statements for fiscal years ending June 30, 2010 and June 30, 2009 were analyzed. These statements showed that JHBMC had cash/cash equivalents and short-term investments in the amount of $22,457,000 in 2010 and $20,223,000 in 2009. These financial statements indicate the availability of sufficient cash resources for the proposed equity contribution.

Recent Financial Performance

JHBMC's most recent operational results for those services that are regulated by the Health Services Cost Review Commission are presented below:

Table 21: Johns Hopkins Bayview Medical Center
Recent Financial Performance

	Fiscal Year Ending		
	Jun-30-2008	Jun-30-2009	Jun-30-2010
REGULATED OPERATIONS ONLY			
Net Operating Revenue	$ 422,918,500	$ 441,163,400	$ 437,999,400
Net Operating Income	$ 9,663,237	$13,855,885	$ 10,271,332
Net Operating Margin	2.28%	3.14%	2.35%
REGULATED AND UNREGULATED OPERATIONS			
Net Operating Revenue	$ 480,717,400	$ 491,642,400	$ 485,304,200
Net Operating Income	$ 4,620,400	$ 1,570,434	$ 920,400
Net Operating Margin	0.96%	0.32%	0.19%
Average-Operating Margin – Peer Group 4 Regulated			
Average-Operating Margin	7.28%	6.71%	6.38%
Average-Operating Margin – Peer Group 4 Regulated and Unregulated			
Average-Operating Margin	1.39%	1.27%	0.60%
Median-Operating Margin – Peer Group 4 Regulated and Unregulated			
Median-Operating Margin	1.81%	1.27%	1.64%
Average-Operating Margin – State Wide Regulated and Unregulated			
Average-Operating Margin	2.30%	2.60%	2.60%

Source: Health Services Cost Review Commission, Disclosure of Hospital Financial and Statistical Data dated September, 2011 which reports regulated and non-regulated activity as reported on the R/E Schedule of the Annual Report.

As reflected in the table above, JHBMC operating margin for services regulated by HSCRC ranged from 2.3% to 3.1% in the last three fiscal years. This was below the average performance of its peer group during this period.

Table 22: Johns Hopkins Bayview Medical Center
Regulated and Unregulated Revenue

Maryland Hospitals-Statewide Average		
Year	Operating Margin	Excess Margin
2010	2.60%	3.80%
2009	2.60%	0.01%
2008	2.30%	1.40%
Johns Hopkins BMC		
Year	Operating Margin	Excess Margin
2010	0.19%	0.48%
2009	0.32%	-1.10%
2008	0.96%	0.30%
HSCRC Target Values		
	2.75%	**4.00%**

Source: Report on Financial Conditions, Fiscal Year 2010, which was published by the Health Services Cost Review Commission on September 2011, and reports financial data of the hospital corporate entity as submitted on the audited financial statements.

The financial performance of the hospital from FY 2008 and 2010 compared to the other hospitals in the State as reported by the HSCRC based on audited financial statements is outlined in the preceding table. JHBMC generated operating and excess margins which were significantly below both Statewide averages and the targets set by the Health Services Cost Review Commission during this period.

Projected Financial Performance

The applicant projected financial performance (current year dollars) of the entire hospital for fiscal years 2012 through 2019 as follows:

Table 23: Johns Hopkins Bayview Medical Center Projected Financial Performance (in 000's)

	Current	Projected						
	2012	2013	2014	2015	2016	2017	2018	2019
Inpatient Revenue	325,767	333,374	336,740	343,030	47,479	351,297	355,241	359,527
Out Patient Revenue	168,295	176,109	178,338	194,423	196,630	200,817	205,282	209,865
Gross Pt. Revenue	494,062	509,483	515,078	537,453	544,109	552,114	560,523	569,392
Allowance For Bad Debt	17,834	18,391	18,593	19,400	19,641	19,930	20,233	20,553
Contractual Allowance	56,415	58,176	58,815	61,370	62,130	63,044	64,004	65,017
Charity Care	19,990	20,614	20,840	21,746	22,015	22,339	22,679	23,038
Net Pt. Service Revenue	399,823	412,302	416,830	434,937	440,323	446,801	453,607	460,784
Other Operating Revenue	3,010	3,010	3,010	3,010	3,010	3,010	3,010	3,010
Net Operating Revenue	402,833	415,312	419,840	437,947	443,333	449,811	456,617	463,794
Salaries, Wages, Etc.	196,591	201,114	201,067	206,239	207,435	209,334	211,269	213,092
Contracted Services	115,761	115,935	116,859	120,669	122,058	123,513	124,951	126,571
Interest on Current Debt	579	2,570	2,390	2,203	1,979	1,759	1,586	1,400
Interest on Project Debt	-	-	-	2,671	2,671	2,671	2,671	2,671
Current Depreciation	26,000	30,511	32,822	35,752	38,612	41,839	45,518	49,431
Project Depreciation	-	-	-	1,750	1,750	1,750	1,750	1,750
Current Amortization	-	-	-	-	-	-	-	-
Project Amortization	-	-	-	-	-	-	-	-
Supplies	53,221	53,318	53,673	55,556	56,169	56,814	57,396	58,041
Other Expenses	-	-	-	-	-	-	-	-
Operating Expenses	392,152	403,448	406,811	424,840	430,674	437,680	445,141	452,956
Income from Operation	10,681	11,864	13,029	13,107	12,659	12,131	11,476	10,838
Operating Margin	2.67%	2.88%	3.13%	3.01%	2.87%	2.72%	2.53%	2.35%
Patient Days	98,563	104,126	104,624	106,024	107,385	108,553	109,686	110,953
Outpatient Visits	500,974	510,056	518,934	540,216	551,537	563,105	574,876	586,879
Equivalent Inpatient Patient	149,482	159,132	160,033	166,116	168,152	170,607	173,070	175,719
Net Revenue/EIPD	$2,695	$2,610	$2,623	$2,636	$2,637	$2,637	$2,638	$2,639
Expense/EIPD	$2,623	$2,535	$2,542	$2,557	$2,561	$2,565	$2,572	$2,578

Source: CON application (DI #2), Table 3, Revenues and Expenses, Entire Facility, Table 2, Statistical Projections.

On January 27, 2012, after discussions with HSCRC staff, the applicant submitted a corrected Table 1 (utilization projections) and a Table 3 revenue and expense schedule with inflation. According to the applicant, the original Table 1 submitted with both this application and a separate Cancer Program CON application incorrectly included newborn admissions within line the MSGA figures for FY2013-FY2019. The inclusion of newborns caused a significant increase projection (6%) in admissions from FY12 to FY13. With a corrected Table 1, the admission increase from FY12 to FY13 becomes 0.3% (in line with their current expectations). This adjustment also impacts the EPIA calculations which were used for the variable expense analysis.

The following table shows projected financial performance of the entire hospital, with assumed inflation, based on the corrected utilization projections:

Table 24: Johns Hopkins Bayview Medical Center Projected Financial Performance (in 000's)

	Current	Projected						
	2012	2013	2014	2015	2016	2017	2018	2019
Inpatient Revenue	325,767	340,901	352,071	366,694	380,778	394,567	408,860	424,496
Out Patient Revenue	168,295	180,070	186,457	207,841	215,542	225,635	236,365	247,906
Gross Pt. Revenue	494,062	520,971	538,528	574,535	596,320	620,202	645,225	672,402
Allowance For Bad Debt	17,834	18,805	19,439	20,739	21,525	22,387	23,291	24,271
Contractual Allowance	56,415	59,488	61,492	65,604	68,092	70,818	73,676	76,779
Charity Care	19,990	21,079	21,789	23,246	24,127	25,094	26,106	27,206
Net Pt. Service	399,823	421,599	435,808	464,946	482,577	501,903	522,153	544,146
Other Operating	3,010	3,100	3,193	3,289	3,388	3,489	3,594	3,702
Net Operating Revenue	402,833	424,699	439,001	468,235	485,965	505,392	525,747	547,848
Salaries, Wages, Etc.	196,591	206,100	211,264	222,317	229,991	238,729	247,862	257,644
Contracted Services	115,761	118,877	122,847	129,896	134,903	140,125	145,480	151,382
Interest on Current Debt	579	2,570	2,390	2,203	1,979	1,759	1,586	1,400
Interest on Project Debt				2,671	2,671	2,671	2,671	2,671
Current Depreciation	26,000	30,511	32,822	35,752	38,612	41,839	45,518	49,431
Project Depreciation				1,750	1,750	1,750	1,750	1,750
Current Amortization	-	-	-	-	-	-	-	-
Project Amortization	-	-	-	-	-	-	-	-
Supplies	53,221	54,780	56,660	60,261	62,755	65,387	68,060	71,010
Other Expenses	-	-	-	-	-	-	-	-
Operating Expenses	392,152	412,838	425,983	454,850	472,660	492,259	512,927	535,288
Income from Operation	10,681	11,861	13,018	13,385	13,305	13,133	12,820	12,560
Operating Margin	2.67%	2.81%	2.99%	2.88%	2.76%	2.62%	2.46%	2.31%
Patient Days	98,563	99,114	99,617	101,319	102,684	103,856	104,988	106,262
Outpatient Visits	500,974	510,056	518,934	540,216	551,537	563,105	574,876	586,879
Equivalent Inpatient	149,482	151,468	152,374	158,746	160,809	163,247	165,682	168,319
Net Revenue/EIPD	$2,695	$2,804	$2,881	$2,950	$3,022	$3,096	$3,173	$3,255
Expense/EIPD	$2,623	$2,726	$2,796	$2,865	$2,939	$3,015	$3,096	$3,180

The applicant projects first use of the proposed project in 2015. JHBMC estimates this project will generate excess revenues over total expenses within three years of project completion. The expansion project is estimated to generate net losses in the first two years of operation and from the third year onward, it generates a positive net income. The applicant also states that the historic and forecast Central Maryland emergency department utilization trends justify the need to expand the current 40 treatment spaces to 48 treatment spaces to better serve the forecasted 66,389 visits at JHBMC in FY2019. For FY 2012 through FY 2019 operating margins are projected to range from 2.35% to 3.13%, within range of the HSCRC target of 2.75%

Commission staff requested a review of the project's financial feasibility from HSCRC staff. That review was not available at the time of issuance of this report. Preliminarily, HSCRC has indicated that its opinion will be positive. The written opinion will be provided as soon as it is available.

Conclusion

While JHBMC is not as financially strong as most of its peer hospitals in the State and fails to meet some HSCRC target values for financial performance, it is part of a financially strong hospital system. The proposed expansion of the Emergency Department and the other

aspects of this project are projected to have a positive impact on the hospital's bottom line. The hospital is financially stable. Therefore, staff concludes that the project and JHBMC should be viewed as viable.

E. Compliance with Conditions of Previous Certificates of Need

COMAR 10.24.01.08G(3)(e), Compliance with Conditions of Previous Certificates of Need. An applicant shall demonstrate compliance with all terms and conditions of each previous Certificate of Need granted to the applicant, and with all commitments made that earned preferences in obtaining each previous Certificate of Need, or provide the Commission with a written notice and explanation as to why the conditions or commitments were not met.

The Johns Hopkins Bayview Medical Center ("JHBMC") submitted three CON applications in recent years.

JHBMC was a co-applicant with The Johns Hopkins Hospital for a Certificate of Need issued by the Maryland Health Resources Planning Commission. Docket No. 96-24-1983, approved on April 8, 1997, was for the relocation of eighteen acute comprehensive inpatient rehabilitation beds from the Good Samaritan Hospital to The Johns Hopkins Health System Corporation; fourteen to be relocated to The Johns Hopkins Hospital, and four (4) to be relocated at the JHBMC. No conditions were applied to the approval of the project. The relocation of the beds to the JHBMC was completed on June 17, 1997. On February 16, 1998, the relocation of the fourteen (14) beds was completed at The Johns Hopkins Hospital.

On November 22,2 005, JHBMC was awarded a CON, Docket Number 05-24-2165, to expand its operating room capacity from 10 to 14 rooms, increase the capacity of its pre- and post-anesthesia care unit, and to construct new air handling infrastructure to support the expanded surgical facilities. A request for modification was approved May 10, 2007. Due to unauthorized increases in capital costs and changes to the project, the original CON was voided. JHBMC obtained a new CON for the project in February, 2009. Final first use approval was granted November 20, 2009.

While implementation of the latter project was mismanaged, it was a complex renovation project involving a unique approach to developing specialized imaging capabilities for two of the additional operating rooms and a certain amount of the cost escalation experienced was difficult to foresee when the project was initially planned. Staff does not believe this problem is a basis for denying approval to proceed with the proposed project.

F. Impact on Existing Providers

COMAR 10.24.01.08G(3)(f),)Impact on Existing Providers and the Health Care Delivery System.
An applicant shall provide information and analysis with respect to the impact of the proposed project on existing health care providers in the health planning region, including the impact on geographic and demographic access to services, on occupancy, on costs and charges of other providers, and on costs to the health care delivery system.

JHBMC believes this project will have no impact on surrounding health care providers. As previously discussed in this report, JHBMC assumed no increase in market share from its current 4.4% of Central Maryland ED cases in developing its projections. Emergency Department volumes are projected to increase from 59,119 (FY11 actual) to 66,389 in FY19, a 1.5% average annual growth rate similar to the forecasted overall market growth rate for this time period. This project should have a positive impact in assuring that ED facilities at JHBMC are available and accessible in the future.

With the density of hospitals in JHBMC's service area and the relatively low occupancy levels of this service, the reduction of pediatric bed proposed by the hospital should not have any significant impact on access to hospitalization services for children. The conversion of five pediatric beds to OB beds is also a change which is unlikely to affect other facilities. JHBMC has the second smallest OB service, in terms of average patient census, in the City of Baltimore.

The project is intended to enable JHBMC to address space inadequacies and enhance the level of adult and pediatric ED service quality and patient satisfaction. It will allow patients that present to the JHBMC ED to be more expeditiously treated, shortening the average time to treatment. The expanded observation capacity for adult, pediatric and psychiatric patients that will not meet admission criteria is a element of the project that directly responds to recent changes in the handling of patients influenced by changes in hospital payment policies. As pressure continues to reduce one-day stay admissions and payers tighten hospitalization criteria, the volume and acuity of observation cases will continue to increase, which probably supports the development of dedicated observation unit space. Another special attribute of this proposed project is the creation of the combined pediatric ED and inpatient unit which offers the advantage of sharing hospital resources and specialized staff.

JHBMC presented average turnover and vacancy rates by position. Turnover rates range from 7.5% to 17.7% with patient care technicians having the highest turnover. Vacancy rates range from 3.4% to 8.3% with patient registrars having the highest vacancy rate. JHBMC receives approximately 45,000 applications a year. With a large numbers of applicants, and relatively low rates of turnover and vacancy, JHBMC reports that it has not had difficulty filling positions in recent years. Generally, new professional and non-professional positions are recruited either internally through promotions or externally from the local community using a variety of sources such as advertising and collaboration with local schools and training programs. For example, JHBMC is a clinical externship site for Medix and TESST training programs, which have become a strong recruitment source for medical assistants. With the wide use of internet, there has been a greater geographic source for recruiting additional personnel. JHBMC has a comprehensive recruitment website (www.bayviewjobs.org) for professional and non-professional positions. JHBMC reports that the majority of its applicants (92%) apply online. JHBMC advertises with professional association websites, such as Nursing Spectrum, Advance for Nurses, and Minority Nurse. Based on all these existing staffing resources and that the required number of new FTEs (approximately 44) will come from several professions, Commission staff concludes that this project is not likely to have a substantial impact on existing providers.

JHBMC costs will increase as a result of this project and thus, in general, the cost of the local and state "system" of delivering hospital services will increase. JHBMC's recent charge position relative to peer hospitals is favorable. It is not likely that this project will have an impact on charges of other providers. JHBMC is primarily expanding services it currently provides and a major proportion of the project will affect ED facilities. Utilization of these facilities will continue to originate in the established JHBMC service area.

In summary, the proposed project is not anticipated to have a negative impact on existing health care providers in Central Maryland or on geographic or demographic access to services. It will be likely to marginally increase pediatric bed occupancy and decrease OB bed occupancy. It will increase the fixed costs of JHBMC but may improve the hospital's ability to better control operating cost increases resulting from higher levels of ED demand. It will not have an impact on cost or charges other providers. The likely impact of this project does not warrant consideration of denying JHBMC approval to undertake it.

V. SUMMARY AND STAFF RECOMMENDATION

Based on its review and analysis of the Certificate of Need application, the Commission staff has determined that the proposed capital project complies with the applicable State Health Plan standards. It is needed. It is a cost-effective approach to meeting JHBMC's objectives. It is viable. It will not have a significant negative impact on service accessibility, cost and charges, or other providers of health care services.

Accordingly, Staff recommends that the Commission **APPROVE** the application of the John Hopkins Bayview Medical Center for a Certificate of Need to expand total emergency department (ED) treatment spaces from 40 to 48, relocate its pediatric unit, create adult and pediatric observation and holding spaces, and convert the vacated pediatric unit into an expanded obstetrics unit with gynecologic inpatient space, at a total approved cost of $40,098,889.

IN THE MATTER OF	*	**BEFORE THE**
	*	
JOHNS HOPKINS	*	**MARYLAND HEALTH**
	*	
BAYVIEW MEDICAL CENTER	*	**CARE COMMISSION**
	*	
DOCKET NO. 11-24-2321	*	

*** ***

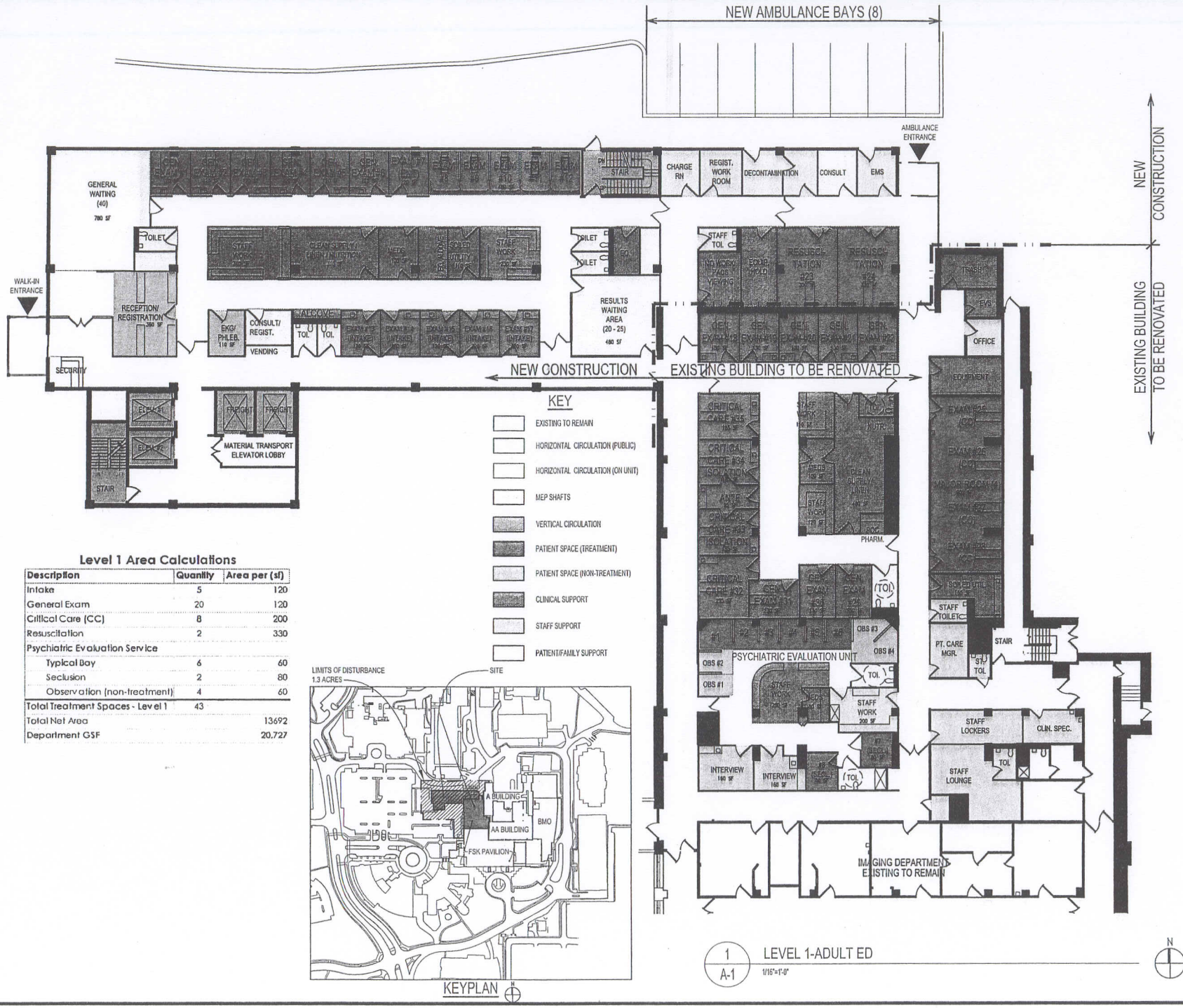
FINAL ORDER

Based on the analysis and findings in the Staff Report and Recommendation, it is this 16th day of February, 2012, by the majority of the Maryland Health Care Commission, **ORDERED:**

That the application of John Hopkins Bayview Medical Center for a Certificate of Need to expand total emergency department (ED) treatment spaces from 40 to 48, relocate its pediatric unit, create adult and pediatric observation and holding spaces, and convert the vacated pediatric unit into an expanded obstetrics and gynecology inpatient space, at a total project cost of $40,098,889, be **APPROVED.**

Appendix A

Floor Plans



Level 1 Area Calculations

Description	Quantity	Area per (sf)
Intake	5	120
General Exam	20	120
Critical Care (CC)	8	200
Resuscitation	2	330
Psychiatric Evaluation Service		
Typical Bay	6	60
Seclusion	2	80
Observation (non-treatment)	4	60
Total Treatment Spaces - Level 1	43	
Total Net Area		13692
Department GSF		20,727

JOHNS HOPKINS MEDICINE
JOHNS HOPKINS BAYVIEW MEDICAL CENTER

Job Title
JHBMC ED EXPANSION
FRANCIS SCOTT KEY PAVILION

Drawing Title
CONCEPTUAL DESIGN
LEVEL 1 FLOOR PLAN

Designed by MS | Drawn by K-B | Checked by MS
Scale 1/16"=1'-0"
Date 8/2/2011
File name FRST-Proposed-ED Annex.dwg

Drawing A-1
Sheet 1 of 3
Job

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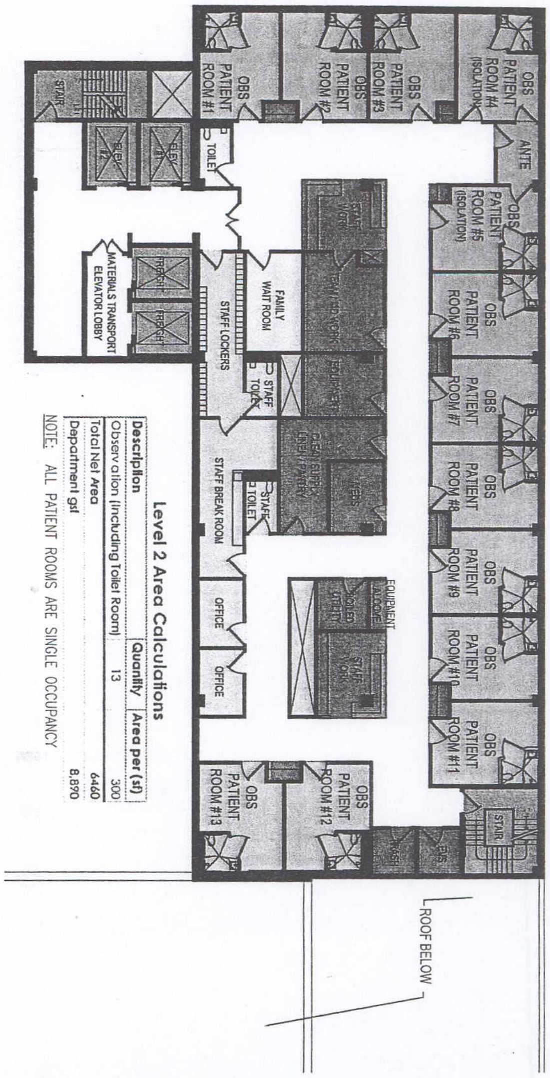


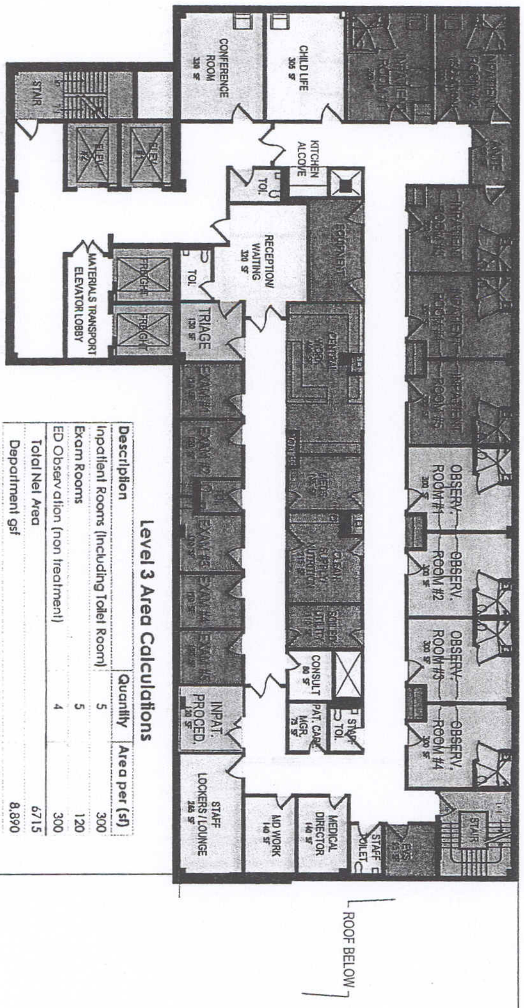
2 A-2 LEVEL 2-ADULT ED OBSERVATION UNIT

1/16"=1'-0"

Level 2 Area Calculations

Description	Quantity	Area per (sf)
Observation (Including Toilet Room)	13	300
Total Net Area		6460
Department gsf		8,890

NOTE: ALL PATIENT ROOMS ARE SINGLE OCCUPANCY



1 A-2 LEVEL 3-PEDIATRIC ED AND INPATIENT COMBINED UNIT

1/16"=1'-0"

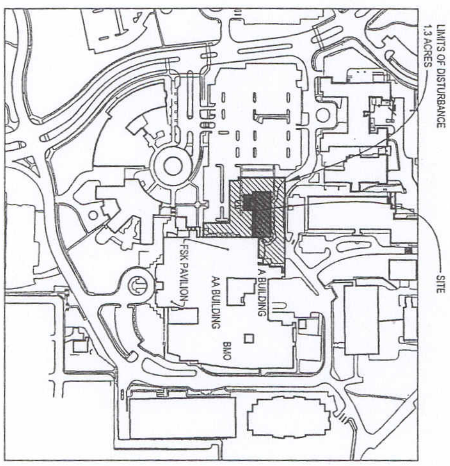
Level 3 Area Calculations

Description	Quantity	Area per (sf)
Inpatient Rooms (Including Toilet Room)	5	300
Exam Rooms	5	120
ED Observation (non treatment)	4	300
Total Net Area		6715
Department gsf		8,890

NOTE: ALL PATIENT ROOMS ARE SINGLE OCCUPANCY

KEY

- EXISTING TO REMAIN
- HORIZONTAL CIRCULATION (PUBLIC)
- HORIZONTAL CIRCULATION (ON UNIT)
- MEP SHAFTS
- VERTICAL CIRCULATION
- PATIENT SPACE (TREATMENT)
- PATIENT SPACE (NON-TREATMENT)
- CLINICAL SUPPORT
- STAFF SUPPORT
- PATIENT/FAMILY SUPPORT



KEYPLAN

Drawing	Drawing Title	Job Title	
A-2 Sheet 2 of 3	CONCEPTUAL DESIGN LEVEL 2 AND 3 FLOOR PLANS	JHBMC ED EXPANSION FRANCIS SCOTT KEY PAVILION	JOHNS HOPKINS MEDICINE JOHNS HOPKINS BAYVIEW MEDICAL CENTER

Job	File name	Date	Scale	Designed by	Drawn by	Checked by
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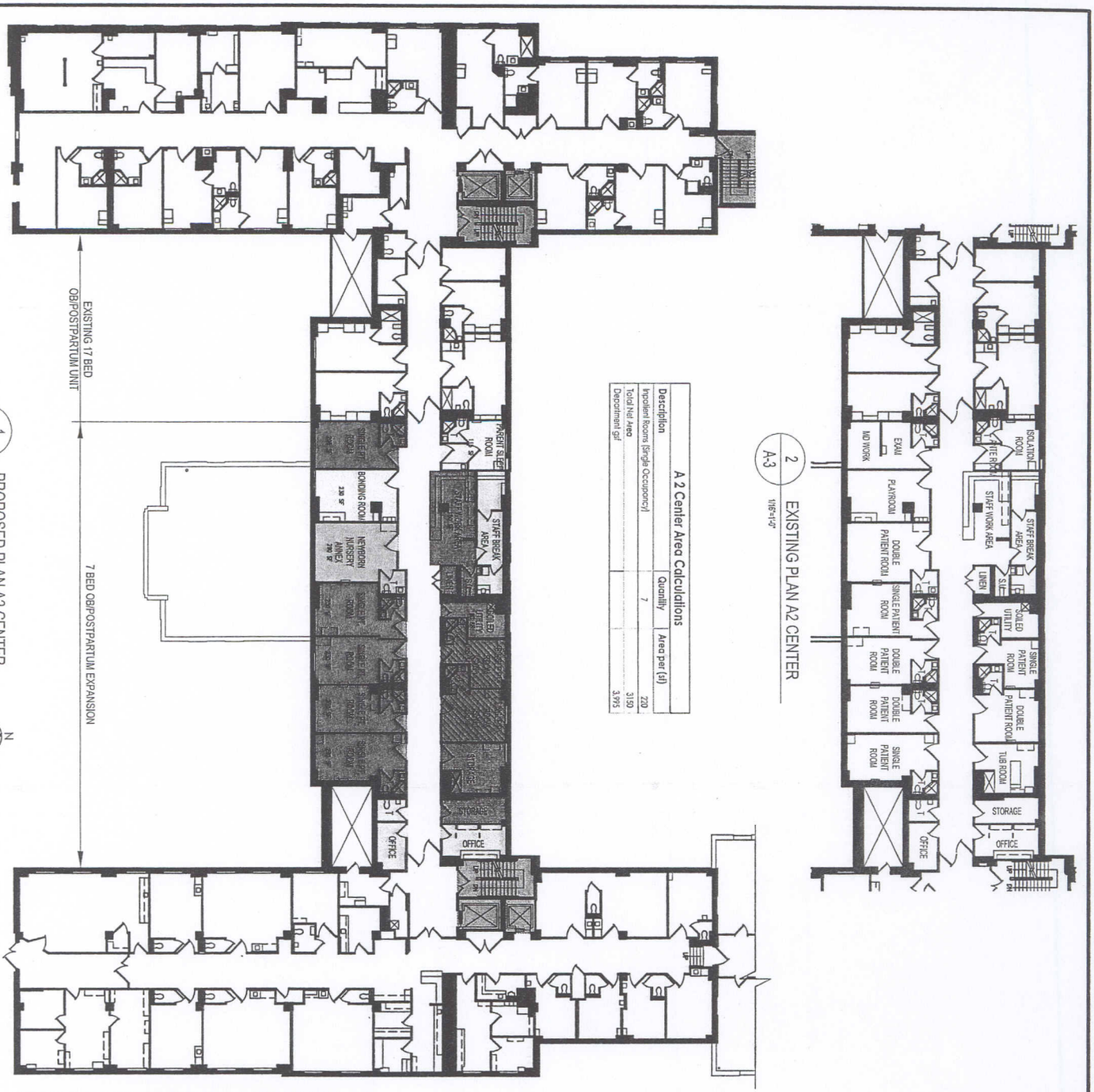
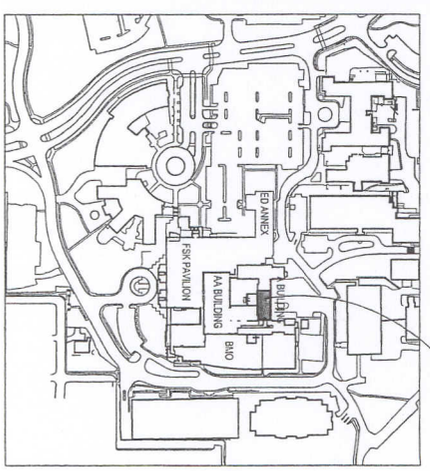


A 2 Center Area Calculations		
Description	Quantity	Area per (sf)
Inpatient Rooms (Single Occupancy)	7	220
Total Net Area		3150
Decontinent gsf		3,995

KEY

- EXISTING TO REMAIN
- HORIZONTAL CIRCULATION (PUBLIC)
- HORIZONTAL CIRCULATION (ON UNIT)
- MEP SHAFTS
- VERTICAL CIRCULATION
- OBSTETRIC ACUTE CARE BED
- GYNECOLOGIC ACUTE CARE BED
- PATIENT SPACE (NON-TREATMENT)
- CLINICAL SUPPORT
- STAFF SUPPORT
- PATIENT/FAMILY SUPPORT

KEYPLAN



Drawing	Drawing Title	Job Title
A-3 Sheet 3 of 3	CONCEPTUAL DESIGN LEVEL 2-CENTER FLOOR PLAN	JHBMC OB/POST-PARTUM EXPANSION 'A' BUILDING-CENTER

Job	File name	Date	Scale	Designed by	Drawn by	Checked by
	A2Center.dwg	8/2/2011	1/16"=1'-0"	MS	K_B	MS

JOHNS HOPKINS MEDICINE
JOHNS HOPKINS BAYVIEW MEDICAL CENTER

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Appendix B

HSCRC Comments

(not included at this time)