



STATE OF ILLINOIS

HEALTH FACILITIES AND SERVICES REVIEW BOARD

525 WEST JEFFERSON ST. • SPRINGFIELD, ILLINOIS 62761 • (217) 782-3516 FAX: (217) 785-4111

DOCKET NO: H-04	BOARD MEETING: May 10, 2016	PROJECT NO: 16-008	PROJECT COST: Original: \$268,842,147
FACILITY NAME: The University of Chicago Medical Center		CITY: Chicago	
TYPE OF PROJECT: Substantive			HSA: VI

PROJECT DESCRIPTION: The applicant (University of Chicago Medical Center) is proposing a major modernization project to increase the number of medical-surgical and intensive care beds by approximately forty percent (40%), relocate and expand the adult emergency department, and seek Level 1 Trauma Designation for its Adult Emergency department at a cost of approximately \$268,842,147. The expected completion date is June 30, 2022.

EXECUTIVE SUMMARY

PROJECT DESCRIPTION:

- The applicant proposes to increase the number of its medical-surgical beds by 168 (from 338 to 506) and to increase the number of its ICU beds by 20 (from 126 to 146) at Bernard Mitchell Hospital. Additionally, the applicant is proposing to renovate Bernard Mitchell Hospital that will replace patient rooms and common areas, upgrade the mechanical systems, and replace the exterior. Bernard Mitchell Hospital will be repurposed as a hospital primarily dedicated to cancer care, which will include a bone marrow transplant service and cellular therapy facility. The Adult Emergency Department will be relocated and expanded from its current location in Bernard Mitchell Hospital to space adjacent to the Center for Care and Discovery and will consist of 41 treatment stations, including four trauma resuscitation bays, two radiographic imaging rooms, and one CT room. As part of the modernization of the Emergency Department a Level I Adult Trauma Center will be located on the hospital campus. The total cost of the project is \$268,842,147 and the expected completion date is June 30, 2022.
- To achieve Adult Level I Trauma Center Designation the applicants will need to apply to the Illinois Department of Public Health (“IDPH”) for Level I approval. The applicants have had initial discussions with IDPH and Region XI’s trauma directors both who are involved in granting approval for Level I designation. The Region XI Trauma Region includes four Adult Level I Trauma Centers
 - Advocate Illinois Masonic Medical Center
 - Northwestern Memorial Hospital
 - John H. Stroger Jr. Hospital of Cook County
 - Mt Sinai Hospital
- The applicant stated the following for the reasons for the proposed increase in beds:
 - Significant increases in inpatient days for cardiology and cardiac surgery, orthopedic medicine, and cancer. From FY13 - FY15, cardiology and cardiac surgery's growth rate in inpatient days was 14.6% and orthopedics' growth rate was 11.4%. Orthopedics also anticipates a 75% increase in inpatient admissions and a 47% increase in OR cases by FY19 from FY14.
 - Inpatient capacity to support the delivery of expanded emergency services, including trauma. During FY15, UCMC admitted 23.3% of its adult emergency department patients to the hospital (69% of whom are from the South Side).
 - Complexity of care index of 2.1229 is 62% higher than the average case mix of 1.31 for the other hospitals in the planning area. Thirty percent (30%) of all transfer requests originating from hospitals within the planning area, including Jackson Park, St. Bernard; and Holy Cross. In fact, transfers from these hospitals’ increased 13.5% from FY14 to FY15.
 - Diversion rate continues to increase in the adult emergency department because of the lack of medical surgical beds.
 - Patient transfers are increasing at the Medical Center from Northwest Indiana and South Bend representing the largest source of growth.

WHY THE PROJECT IS BEFORE THE STATE BOARD:

- This project is before the State Board because the project proposes to substantially change the scope and functional operation of a health care facility and is in excess of the capital expenditure of \$12,797,313 as defined by Illinois Health Facilities Planning Act (20 ILCS 3960(3)).

OUTSTANDING PROJECTS:

- Listed below are the current outstanding projects for The University of Chicago Medical Center.

- **Project #07-153**

The permit holder was approved for a major modernization of the Medical Center in new construction to house general surgical rooms, a GI Procedure Unit, Interventional Radiology, other Radiology imaging, 180 M/S beds, 60 ICU beds, preparation / recovery, central sterile processing, pharmacy and respiratory therapy at a cost of \$785,745,988 in May 2008. This project was altered to increase the cost from \$785,745,988 to \$797,496,507 or \$11,750,519 which is 1.49% of the total project cost on June 19, 2012. The expected completion date is December 2016.

- **Project #14-013**

The permit holder was approved to relocate one hundred twenty two (122) medical surgical beds and thirty two (32) intensive care beds from Bernard A. Mitchell Hospital to the Center for Care and Discovery on The University of Chicago Medical Center campus. Additionally the permit holder was approved to increase intensive care beds by twelve (12) beds from 114 to 126 beds and increase observation beds from fifteen (15) to forty six (46) beds. The approved cost of the project was \$123,504,716. The expected completion date is September 30, 2017. The permit holder was subsequently approved to increase the total project costs from \$123,504,716 to \$126,282,370 or \$2,777,654 (2.25%) and increase the gross square footage by 2,152/gsf on February 16, 2016. Additionally the permit holder was approved to reduce the observation beds by two (2) beds from 46 to 44 observation beds on 12/09/2014 and reduced by seven (7) beds on 2/16/2016 for a total of thirty nine (39) observation beds.

- **Project #14-023**

The permit holder was approved to construct a four-story ambulatory care medical office building, along with a two-story parking garage, at the northwest corner of 143rd Street and LaGrange Road in the Orland Park, Illinois. The approved cost of the project is \$66,873,052. The approved completion date is June 30, 2018.

- **Project #14-031**

The permit holder was approved to relocate its Labor & Delivery Unit from its current location in Bernard A. Mitchell Hospital to the third floor of its Comer Center for Children and Specialty Care. The approved cost of the project is \$16,993,653. The approved completion date is December 31, 2017.

PUBLIC HEARING/COMMENTS:

- There was no public hearing requested and no letters of opposition were received by the State Board Staff. Those in support of the project believe the proposed project will expand access to emergency, specialty and trauma care on the South Side of Chicago. Many letters from the community stated that Medical Center is a local hospital to those who live on the South Side, and one to which the community wants, and needs, greater access. There is a scarcity of emergency care on the South Side of Chicago. Others stated lives of South Side residents are much more complex and demand additional services. The Medical Center's plan will meet the South Side's unique health care needs with increased bed capacity, a new state-of-the-art emergency department and expanded access to specialty care such as cancer and cardiovascular care.
- Letters of support have been received from the following:

o South Shore Hospital	Friend Family Health Center
o Roseland Community Hospital	Access Community Health Network
o Roseland Medical District	Chicago Family Health Center
o Jackson Park Hospital	Near North Health Service Corporation
o La Ribida Children's Hospital	Chicago Fire Department
o Loretto Hospital	Ill. African Am. Coalition for Prevention

- o St Bernard Hospital
- o US Representative Bobby Rush
- o Mayor Rahm Emmanuel
- o State Senator Mattie Hunter
- o State Representative Kwame Raoul
- o State Representative. Christian Mitchell
- o State Representative Barbara Lynn Currie
- o The Chicago Fire Department
- o Christian Community Health Center
- o Bright Star Community Outreach
- o Chicago Urban League
- o Sunshine Gospel Ministries
- o Survey of Registered Voters on South Side of Chicago [Hart Research Associates dated April 18, 2016]
- Network of Woodlawn
- The Chicago Department of Public Health
- Healthcare Consortium of Illinois
- Museum of Science and Industry
- Chicago Survivors
- Quad Communities Development Corp
- Chicago Department of Public Health
- Ill. African Am. Family Commission
- Chicago Urban League
- University Church
- New Life Covenant Church
- Trinity United Church

CONCLUSION:

- The applicant is proposing to increase the number of medical surgical beds by approximately fifty percent (50%) from three hundred thirty eight (338) to five hundred six (506) beds or one hundred sixty eight (168) beds and intensive care beds by approximately sixteen percent (16%) from one hundred twenty six (126) beds to one hundred forty six (146) beds or twenty (20) beds. The applicant is expecting medical surgical inpatient days to grow 6.7% annually from 2015-2017 and then 6.5% per year 2018-2021 plus 11,578 days for trauma patients starting in 2018 and each year to 2021 should Level I trauma designation be achieved. Intensive care inpatient days are expected to grow at a 1.2% compounded annual rate until 2021.
- Historical utilization of medical surgical and intensive care beds at the University of Chicago Medical Center for the past two (2) years (2014-2015) will justify three hundred forty three (343) medical surgical beds and not the five hundred six (506) medical surgical beds being requested and one hundred forty one (141) intensive care beds and not the one hundred forty six (146) being requested at the State Board's target occupancy.
- Adult emergency department visits are expected to continue to grow an annual rate of 6.51% until 2021.
- The applicant addressed a total of nineteen (19) criteria and did not meet the following:

State Board Standards Not Met	
Criteria	Reasons for Non-Compliance
77 IAC 1110.530 (c) (2) (4) – Planning Area Need - Medical Surgical Beds, Intensive Care Beds Expansion	Historical utilization at the Medical Center does not justify the number of medical surgical and intensive care beds being proposed at the target occupancy of ninety percent (90%) and sixty percent (60%) respectively. Historical utilization will justify three hundred forty three (343) medical surgical beds and not the five hundred six (506) medical surgical beds being requested and one hundred forty one (141) intensive care beds and not the one hundred forty six (146) being requested.

State Board Standards Not Met	
Criteria	Reasons for Non-Compliance
77 IAC 1110.3030 (c) (d) - Clinical Services Other than Categories of Service - Adult Emergency Department	The applicant believes the growth in the adult emergency department visits of approximately 6.51% annually for the years CY 2009-2015 will continue until CY 2021. Average historical utilization will justify twenty eight (28) stations at the State Board Standard of 2,000 visits per station and not the forty one (41) stations being proposed. The applicant is currently approved for thirty six (36) stations. Additionally the applicant cannot justify the number of X-Ray machines based upon the historical usage.
77 IAC 1120.140 (c) – Reasonableness of Project Costs	The applicant exceeds the State Board Standard of \$503.23 by \$115.07 or \$18,511,550. The applicant is projecting a new construction and contingency costs of \$618.30. See page 21 below for a complete discussion of the reasons for the overage.

STATE BOARD STAFF REPORT
Project #16-008
The University of Chicago Medical Center

APPLICATION SUMMARY/CHRONOLOGY	
Applicant	The University of Chicago Medical Center
Facility Name	The University of Chicago Medical Center
Location	5841 S. Maryland Avenue, Chicago, Illinois
Operating Entity/Licensee	The University of Chicago Medical Center
Owner of the Facility	The University of Chicago
GSF	259,617 GSF
Application Received	February 16, 2016
Application Deemed Complete	February 18, 2016
Financial Commitment Date	May 10, 2018
Can Applicant Request Another Deferral?	Yes
Has review been extended?	No

I. Proposed Project

The applicant proposes to increase the number of its medical-surgical beds by 168 (from 338 to 506) and to increase the number of its ICU beds by 20 (from 126 to 146) at Bernard Mitchell Hospital. Additionally, the applicant is proposing to renovate Bernard Mitchell Hospital that will replace patient rooms and common areas, upgrade the mechanical systems, and replace the exterior. Bernard Mitchell Hospital will be repurposed as a hospital primarily dedicated to cancer care, which will include a bone marrow transplant service and cellular therapy lab. The Adult Emergency Department will be relocated and expanded from its current location in Bernard Mitchell Hospital to space adjacent to the Center for Disease and Recovery and will consist of 41 treatment stations, including four trauma resuscitation bays, two radiographic imaging rooms, and one CT room. As part of the modernization of the Emergency Department a Level I Adult Trauma Center (if Level 1 Designation is achieved) will be located on the hospital campus. The applicant has a Level 1 Pediatric Trauma Center designation at this time. The total cost of the project is \$268,842,147 and the expected completion date is June 30, 2022.

To achieve Adult Level I Trauma Center Designation the applicants will need to apply to the Illinois Department of Public Health (“IDPH”) for Level I approval. The applicants have had initial discussions with IDPH and Region XI’s trauma directors both who are involved in granting approval for Level I designation.

II. Summary of Findings

- A.** The State Board Staff finds the proposed project **does not** appear to be in conformance with the provisions of Part 1125.
- B.** The State Board Staff finds the proposed project **does not** appear to be in conformance with the provisions of Part 1125.800

III. General Information

The applicant is The University of Chicago Medical Center (“Medical Center”). The Medical Center is located at 5841 S. Maryland Avenue, Chicago, Illinois. The Medical Center is the operating entity/licensee and the owner of the real property is the University of Chicago. The project is a substantive project subject to a 77 IAC 1110 and 77 IAC 1120 review. Project obligation will occur after permit issuance.

The **University of Chicago Medical Center** is an Illinois not-for profit corporation. The Medical Center operates the Center for Care and Discovery, the Bernard Mitchell Hospital, the Chicago Lying-In Hospital, the University of Chicago Comer Children's Hospital, the Duchossois Center for Advanced Medicine and various other outpatient clinics and treatment areas. These buildings are operated under a single hospital license.

The University of Chicago as the sole corporate member of Medical Center elects the Medical Center Board of Trustees and approves its' By-Laws. The Medical Center President reports to the University's Executive Vice President for Medical Affairs. The relationship between the Medical Center and the University is defined in the Medical Center By-Laws, an Affiliation Agreement, an Operating Agreement and several Leases. The Medical Center is a tax-exempt organization under Section 501(c) 3 of the Internal Revenue Code. *(See Footnotes to Audited Financial Statements provided by the applicant)*

The Duchossois Center for Advanced Medicine is a six-story, 525,000-square-foot building housing 329 examination rooms, 90 rooms for outpatient procedures, a PET/CT scanner, two helical CT scanners, and three echoplanar MRI scanners. It has facilities for nuclear medicine, eight outpatient surgery suites, and four (4) linear accelerators and two (2) simulators for radiation therapy. The Chicago Lying in Hospital was opened in 1932 and was the Medical Center's first obstetric hospital. There are no beds or any clinical operations in the building. The building is used for office space and research labs.

Table One outlines the number of beds by location at the University of Chicago Medical Center campus that have been authorized by the State Board and the number of beds proposed by location. Note all of the locations listed in Table One are licensed by IDPH under one license as The University of Chicago Medical Center and not multiple licenses. If this project should be approved the Medical Center will have a total of 805 beds.

TABLE ONE University of Chicago Medical Center									
	Current Authorized Beds by Location					Proposed Beds By Location			
	Bernard A Mitchell Hospital	Center for Care and Discovery	Comer Center for Children and Specialty Care	Total		Bernard A Mitchell Hospital	Center for Care and Discovery	Comer Center for Children and Specialty Care	Total
Medical Surgical Beds	150	188		338		196	310		506
ICU Beds	32	64	30	126		20	96	30	146
Obstetric Beds	46			46		46			46

TABLE ONE University of Chicago Medical Center									
	Current Authorized Beds by Location					Proposed Beds By Location			
	Bernard A Mitchell Hospital	Center for Care and Discovery	Comer Center for Children and Specialty Care	Total		Bernard A Mitchell Hospital	Center for Care and Discovery	Comer Center for Children and Specialty Care	Total
Pediatric Beds			60	60				60	60
NICU Beds			47	47				47	47
Observation Beds ⁽¹⁾	15					39			
Total Beds	228	252	137	617		262	406	137	805

Source: March 31, 2016 Update to the Inventory of Beds and Services

1. Observation beds are not considered in the total number of beds at the location.

The Medical Center is located in the A-03 Hospital Planning Area. The following hospitals are located in the A-03 Hospital Planning Area. There is a calculated excess of five hundred fifty seven (557) medical surgical beds and twenty three (23) ICU beds in the A-03 Hospital Planning Area by CY 2018. Table Two below lists the hospitals in the A-03 hospital planning area and their total number of beds, their medical surgical and intensive care beds and their utilization for CY 2014 for each hospital.

TABLE TWO Hospitals within the A-03 Hospital Planning Area ⁽¹⁾						
	City	Total Beds	Medical Surgical		Intensive Care	
Name of Facility			Beds	Utilization	Beds	Utilization
Advocate Trinity Hospital	Chicago	205	158	62.6%	24	34.7%
Holy Cross Hospital ⁽⁵⁾	Chicago	260	166	73.7%	20	96.5% ⁽³⁾
Jackson Park Hospital	Chicago	256	144	35.1%	8	80.9%
Mercy Hospital & Medical Center	Chicago	464	289	38.7%	30	52.5%
Provident Hospital of Cook County ⁽⁴⁾	Chicago	113	79	18.4%	6	0.00%
Roseland Community Hospital	Chicago	134	77	41.2%	10	.6%
South Shore Hospital, Corp.	Chicago	143	114	53.1%	8	77.3%
St. Bernard Hospital	Chicago	210	126	46.2%	10	52.0%
University Of Chicago Medical Center	Chicago	617	338	87.9%	126	65.7%
Total Beds/Average Utilization		2,402	1,491	50.77%	242	47.00%
LaRabida Children's Hospital ⁽²⁾	Chicago	49				

1. Information taken from CY 2014 Hospital Profile. Information provided by the hospitals

2. Hospital has pediatric beds only.

3. Hospital did not report utilization data for ICU beds for CY 2014. Percentage reflected in this table is for CY 2013.

4. Discontinued five (5) intensive care beds 11/13/2015. Did not report any utilization in CY 2014.

5. Hospital modification of Permit #13-076 added 38 medical surgical beds 10/1/2015 now has 204 medical surgical beds.

Table Three shows the compounded annual growth in inpatient days for the period (CY 2010-2014) for the A-03 Hospital Planning Area, HSA 6, HSA 7, the State of Illinois, and the University of Chicago Medical Center. Table Four outlines the compounded annual growth rate in medical surgical and intensive care inpatient days for the five largest hospitals in the State of Illinois by number of beds for the same period. As can be

seen by these two tables the State Board is not seeing the growth in inpatient days at other hospitals similar to what The University of Chicago Medical Center is experiencing.

TABLE THREE Compounded Growth Rate for Medical Surgical and Intensive Care Patient Days (2010-2014) ⁽¹⁾					
Service	Hospital Planning Area A-03	HSA6 City of Chicago	HSA7 (Chicago and Suburban Cook County)	State of Illinois	University of Chicago Medical Center
Medical Surgical	+0.07%	-1.60%	-1.68%	-1.37%	+7.14%
Intensive Care	-2.92%	+0.22%	-.45%	-1.02%	+2.38%
1. Observation days were included in the calculations. Source: Hospital Profile Information CY 2010-2014					

TABLE FOUR Compounded Growth Rate for Medical Surgical and Intensive Care Patient Days (2010-2014) Five Largest Hospitals in the State of Illinois by Number of Beds						
Hospitals	City	Total Beds	Medical Surgical Beds	Compounded Annual Growth %	Intensive Care Beds	Compounded Annual Growth %
Advocate Lutheran General Hospital	Park Ridge	638	313	0.16%	61	-0.28%
Rush University Medical Center	Chicago	727	342	0.10%	132	8.99%
Advocate Christ Hospital & Medical Center	Oak Lawn	788	394	-0.44%	153	-0.60%
Northwestern Memorial Hospital	Chicago	894	530	-1.05%	115	1.88%
The University of Chicago	Chicago	617	338	7.14%	114	2.38%
Average				1.18%		2.47%
Source: Information taken from 2010-2014 Hospital Profiles						

Table Five below outlines the average length of stay of medical surgical and intensive care beds for CY 2010 and CY 2014. Based upon this information it appears there has been an increase in the average length of stay for both medical surgical and intensive care services from 2010 to 2014 for all areas reflected in Table Five.

The University of Chicago Medical Center average length of stay when compared to the planning area, service areas and the State of Illinois is approximately one (1+) day longer for medical surgical services in 2014. Average length of stay for intensive care services appears to be similar to the areas reported below.

TABLE FIVE Average Length of Stay (2010 & 2014)										
	A-03		HSA6 City of Chicago		HSA7 Suburban Cook and Dupage County		State of Illinois		University of Chicago Medical Center	
	2010	2014	2010	2014	2010	2014	2010	2014	2010	2014
Medical Surgical	4.7	5.3	4.8	5.2	4.7	5.1	4.6	4.9	5.9	6.4
Intensive Care	6.4	6.5	6.1	5.6	4.9	4.4	5.1	4.9	4.8	4.8

TABLE FIVE Average Length of Stay (2010 & 2014)					
	A-03	HSA6 City of Chicago	HSA7 Suburban Cook and Dupage County	State of Illinois	University of Chicago Medical Center
Source: Information taken from 2010 and 2014 Hospital Profile Information					

IV. Project Costs and Sources of Funds

The applicant is funding this project with cash of \$68,842,147 and a bond issue of \$200,000,000.

TABLE SIX Project Costs and Sources of Funds			
	Reviewable	Non Reviewable	Total
Uses of Funds			
Preplanning Costs	\$466,267	\$304,061	\$770,328
Site Survey and Soil Investigation	\$17,694	\$4,451	\$22,145
Site Preparation	\$493,934	\$322,104	\$816,038
New Construction Contracts	\$90,479,752	\$59,003,477	\$149,483,229
Contingencies	\$9,047,975	\$5,900,348	\$14,948,323
Architectural and Engineering Fees	\$5,354,592	\$3,491,826	\$8,846,418
Consulting and Other Fees	\$2,796,774	\$1,823,826	\$4,620,600
Movable or Other Equipment	\$47,891,801	\$1,003,809	\$48,895,610
Bond Issuance Expense	\$2,044,352	\$955,648	\$3,000,000
Net Interest Expense During Construction	\$17,428,962	\$8,147,295	\$25,576,257
Other Costs to be Capitalized	\$7,180,601	\$4,682,599	\$11,863,200
Total Uses of Funds	\$183,202,703	\$85,639,444	\$268,842,147
Sources of Funds	Reviewable	Non Reviewable	Total
Cash and Securities	\$46,912,538	\$21,929,609	\$68,842,147
Bond Issues	\$136,290,165	\$63,709,835	\$200,000,000
Total Sources of Funds	\$183,202,703	\$85,639,444	\$268,842,147
Source: Page 15 of the Application for Permit			

V. Cost Space Chart

The applicant is proposing a total of 259,617/gsf of new construction for this project. 21,508/gsf will be vacated. Of the 21,508/gsf of proposed vacated space the present emergency department in Bernard Mitchell Hospital occupies 16,517/gsf of space. Per the applicants the likely use for this space once vacated is a new home for the Student Care Center, serving students attending the University of Chicago. This location is accessible and only two blocks from the main quadrangle of the University's campus.

TABLE SEVEN Cost Space Requirements ⁽¹⁾						
Department						
Reviewable	Cost	Existing	Proposed	New Construction	As Is	Vacated Space

TABLE SEVEN Cost Space Requirements ⁽¹⁾						
Department						
Reviewable	Cost	Existing	Proposed	New Construction	As Is	Vacated Space
Adult Emergency	\$30,374,985	16,517	29,017	29,017		16,517
Radiology	\$5,159,547	117,306	116,977	1,671		2,000
Medical Surgical	\$122,729,291	236,012	345,334	109,322	236,012	
ICU	\$12,810,399	77,446	87,709	10,263	77,446	
Cancer Ancillaries	\$12,128,483	2,991	10,697	10,697		2,991
Total Reviewable	\$183,202,705	450,272	589,734	160,970	313,458	21,508
Non Reviewable						
Staff Support	\$6,247,571	1,093,742	1,111,962	18,220	1,093,742	
Public	\$37,862,380	598,546	663,550	65,004	598,546	
Bldg Systems	\$41,529,491	961,201	976,624	15,423	961,201	
Total Non Reviewable	\$85,639,442	2,653,489	2,752,136	98,647	2,653,489	
Total	\$268,842,147	3,103,761	3,341,870	259,617	2,966,947	21,508
<i>Source: Application for Permit page 296</i> 1. Construction will occur in the existing structures but would be extensive and involve new infrastructure and thus is presented by the applicant as New Construction. The Board Staff is in agreement with this presentation per 77 IAC 1130.140.						

VI. Background of the Applicant

A) Criterion 1110.530 (b) (1) (3) – Background of the Applicant

A letter signed by President and CEO Sharon O’Keefe of the Medical Center was provided that stated *“I hereby authorize the State Board and State Agency access to information from any licensing/certification agency in order to verify any and all documentation or information submitted in relation to this permit application. I further authorize the Illinois Department of Public Health to obtain any additional documentation or information that said agency deems necessary for the review of the application as it pertains to Section 1110.230(a)(3)(C) of the Review Board Rules.”*

The applicant provided a letter from the Historic Preservation Agency stating that the property is in compliance with Section 4 of the Historic Preservation Act (20 ILCS 3420/1) (see *Application for Permit page 290*) Attestation was provided by the President and CEO of the Medical Center Sharon O’Keefe that the site of the project is judged an "Area of Minimal Flood Hazard". FEMA documentation was provided as required. (See *Application for Permit pages 285-288*) The applicant provided copies of the Lease Agreements between The University of Chicago and The University of Chicago Medical Center related to the property known as Bernard Mitchell Hospital, Center for Care and Discovery, and Adult Emergency Department showing that the Medical Center has control of the site being used for this project. (See *Application for Permit pages 35-281 for copies of the leases*) Additionally the Medical Center is in Good Standing with the State of Illinois as evidenced by the Certificate of Good Standing provided at *page 37 of the Application for Permit*. Evidence of JACHO accreditation and IDPH licensure was provided as required. (See *Application for Permit pages 297-298*)

THE STATE BOARD STAFF FINDS THE PROPOSED PROJECT IN CONFORMANCE WITH CRITERION BACKGROUND OF APPLICANT (77 IAC 1110.530 (b) (1) (3))

VII. Purpose of the Project, Safety Net Impact, Alternatives

A) Criterion 1110.230 (a) – Purpose of the Project

Per the applicant:

*“The Medical Center proposes a project with three related and interdependent components, each of which is necessary for the success of the other two: (1) the addition of a substantial number of inpatient beds in Mitchell Hospital (2) the relocation of the Medical Center’s Adult Emergency Department from its current location in Mitchell to new construction adjacent to the Center for Care & Discovery, and (3) a commitment to establish a Level I Adult Trauma Center on its Hyde Park Campus. The purpose of Project is to expand access to essential health care services in Chicago's underserved South Side overall and, particularly, in three important clinical areas Specialty Care, Emergency Care, and Adult Level I Trauma Care - for which the demand is strong, but the Medical Center is undersized.” (See *Application for Permit pages 301- 310 for a complete discussion*)*

B) Criterion 1110.230 (b) – Safety Net Impact Statement

A Safety Net Impact Statement was provided as required at *pages 544-553 of the Application for Permit* and addressed all of the requirements of the State Board.

TABLE EIGHT Safety Net Impact Information				
Net Patient Revenue		\$1,267,102,000	\$1,303,794,000	\$1,409,093,000
CHARITY				
Charity (# of patients)		2013	2014	2015
	Inpatient	655	759	273
	Outpatient	20,446	22,720	28,178
Total		21,101	23,479	28,451
Charity (cost in dollars)				
	Inpatient	\$7,524,000	\$10,633,000	\$4,420,000
	Outpatient	9,096,000	11,367,000	10,576,000
Total		\$16,620,000	\$22,000,000	\$14,996,000
% of Charity Care to Net Revenue]		1.30%	1.69%	1.61%
MEDICAID				
Medicaid (# of patients)		2013	2014	2015
	Inpatient	7,215	7,701	9,951
	Outpatient	88,065	95,827	99,189
Total		95,280	103,528	109,140
Medicaid (revenue)				
	Inpatient	\$165,714,000	\$176,140,000	\$213,747,000
	Outpatient	44,274,000	61,135,000	69,987,000
Total		\$209,988,000	\$237,275,000	\$283,734,000
% of Medicaid to Net Revenue		16.57%	18.20%	20.14%
Source: Page 554 of the Application for Permit and supplemental information provided by the applicant.				

C) Criterion 1110.230 (c) – Alternatives to the Project

The alternatives considered by the applicant are presented below in their entirety because the State Board Staff considered the analysis important to the understanding of the project size and scope of the proposed project. The alternatives considered by the applicant were provided by department. (*See Application for Permit page 311-317*)

I. Adult Emergency Department Alternatives Considered

1. The alternative of expanding the current Adult emergency department in Mitchell Hospital was considered. Due to the inherent difficulties of expanding and renovating in place while continuing to operate an emergency department service, there are design limitations that make this a project of lesser scope. While the square footage would be similar, the inevitable constraints means the renovated project would not be as good as the proposed project. For example, the present ambulance bay/public drop-off area shares the same lot and entrance. The cost of achieving a significant separation of these types of patients, one set much more emergent than the other, is prohibitive so it was

assumed that the current, suboptimal single entrance would remain. The renovation would add 18,000/dgsf to the current 16,517/dgsf plus 5,000/dgsf for swing space a total 39,517/dgsf. Some of the additional area is currently vacant, but other area is occupied and the cost of relocating those occupants has been included. There is a substantial construction contingency since Mitchell Hospital is 33 years old and it is likely that infrastructure improvements will be required (HVAC, electrical, plumbing, IT systems). In order to maintain present operations, the work will require many phases which also adds' to cost. Total cost for this alternative would have been \$40 million. But the most important reason this alternative was rejected is that the emergency department would remain too far from the key inpatient services such as Operating Rooms, Interventional Radiology, Cardiac Catheterization Labs, Neuroscience Patient Unit, and GI Procedures Unit. This is a 12 to 15 minute trip from the Mitchell emergency department, as opposed to a five minute trip estimated for the proposed location. This is a critical factor if the Medical Center is granted Level I Trauma status.

2. A joint venture was explored with Mt Sinai Health System in which Level 1 Trauma service would be provided at Mt. Sinai's Holy Cross Hospital location. The initial expectation was that the Medical Center would provide \$43 million in capital for facility improvements at Holy Cross to support the Level 1 Trauma service. The Medical Center would have also provided specialty physician services, notably in orthopedics and neurosurgery. The cost for this option would have been \$43 million. As the parties explored the arrangement in greater depth, it was ultimately concluded that Level I Trauma services could best be instituted in A-03 Hospital Planning Area by being located at the Medical Center. This would consolidate trauma services on one campus joining the Pediatric Level 1 Trauma service at Comer Hospital. There is also the Burn and Complex Wound Center at the Medical Center and an expanded new location is currently under construction in the CCD. In addition, there is a modern operating suite recently opened in CCD along with other interventional procedure areas. Assuming additional patient beds are granted, these represent most of the key capabilities necessary for a comprehensive trauma service and the reason, after extensive due diligence and discussions with the Mt. Sinai Health System the possibility of locating the service at Holy Cross, that ultimately it was decided that the UCMC site provides the best solution, for the City's South Side community.
3. Each of the other eight hospitals in Planning Area A-3 where the Medical Center is located offers emergency services. The number of stations in each facility ranges from 11 to 33 based on their 2013 IDPH survey. Overall, these facilities average 1,492 visits per station. No single facility could absorb Medical Center's annual 52,000 visits, which on average would result in 3,855 visits per station per year, which would be extremely difficult operationally. Capacity would have to be added, which is estimated at \$23 million. Another way to consider using other health resources is to distribute the 52,000 annual visits among all other providers. Mathematically, this would bring each provider up to 1,786 visits per station, within the State's standard of 2,000 visits. The question is whether this approach makes sense. While a good portion of emergency care is of a primary or secondary nature the patients served by the Medical Center tend more, toward a higher acuity of care. The ESI Triage Research Team, LLC developed a triage algorithm that is commonly used to score patients. There are five categories in this system. For the Medical Center in a recent 12 month period, there were forty five percent (45) of the patients in the two highest

emergency categories. Twenty three (23) percent of the patients arriving at the Medical Center's emergency department are hospitalized. In this respect, the Medical Center's emergency department is not simply a destination for care, but a gateway to the tertiary level of services offered at the Medical Center. Many of these services are not offered, or at least not to the same extent, at the other hospitals. Thus, the alternative of having the Medical Center's emergency department patients cared for at neighboring emergency departments was not pursued.

II. Bernard Mitchell Renovation - Inpatient Beds Alternatives Considered

1. Initially, the Medical Center explored the possibility of constructing a 9-story, 304,000/bgsf bed tower to the north of the CCD on 57th Street. There would have been four floors containing med/surg beds for a total of 128, a floor for ICU beds, totaling 22 beds, two lower floors for diagnostic functions and procedures, the ground level to contain an emergency department, and the basement level for storage and support infrastructure. Devoting the upper floors to cancer was also considered. Advantages would have been a blank slate for new construction, abundant space, and excellent adjacencies by way of tunnels and bridges to the CCD and the new parking deck to the west. The cost for such a new building is \$300 million. Adjusting the plan to provide the 216 beds proposed rather than 150 beds would require two additional floors and an increase in cost to \$367 million. This alternative was not pursued owing to the substantially greater cost of \$367 million. This alternative places a relatively small building on the last easily converted site that is adjacent to the modern clinical center consisting of Comer Children's Hospital, the outpatient Duchossois Center for Advanced Medicine, and the CCD, thus possibly not making the best use of this high value site.
2. An approach of lesser scope was also examined, that of renovating Mitchell to house an additional 84 med/surg and 10 ICU beds, as well as a thorough updating of infrastructure and public areas on the ground and second level. An existing 28 med/surg beds in Mitchell would have been included in the project. Much of the infrastructure and public area work would have had to have been done in full since this work is best done completely rather than in proportion to the clinical development. There is the consideration of a consistent appearance of new curtain wall and the entrance and lobbies being developed in full infrastructure such as plumbing lines, electrical riser and closets, computer closets, IT cabling and the antenna system, and HV AC central capacity would be best done in total rather than piecemeal given the economies of scale, but more importantly that these systems generally operate as a whole rather than in separate parts.' A patchwork of new and old infrastructure lacks the operational efficiencies and reliability of substantially modernized systems. This alternative has an estimated cost of \$148 million. One critical negative aspect of this alternative is an economic imbalance of making the costly improvements in public areas and infrastructure for only a portion of the clinical expansion. The revenue-generating clinical areas pay for the other improvements and there would be just over half (56%) of the recommended 216 beds provided in this reduced scope option. Thus, this is economically more risky. This risk involves operating income and is not captured by the capital costs reported in this analysis. There would also be greater cost if the remainder of the 216 beds were eventually built out due to a loss of economies of scale afforded by the larger project. This premium is estimated at \$8 million. UCMC is convinced that growth trends of the past six years will continue and that all 216 beds proposed will be well utilized by 2021.

3. With a joint venture to provide the inpatient services proposed Medical Center would be able to lower its risk by sharing it with another provider or providers. It was estimated that the cost of the recommended option, \$200 million would be 10% higher or \$220 million if spread over one or more partners in a joint venture, due to the loss of economies of scale. It was assumed that thorough renovation of existing or new facilities elsewhere would be required to provide comparable modern facilities. The justification for the proposed option is a continuation of growing demand for services at UCMC. The majority of the patients reside in the Medical Center's primary service area, which consists mostly of the A-03 South Chicago planning area. The Medical Center asserts that patients coming to the Medical Center are seeking excellent care and in many cases for specialized care for serious and/or complex conditions. This is reflected in the case mix index for Medical Center that was 2.1229 for the 12 months ending December 31, 2014, which is 62% greater than the other hospitals in the A-03 Hospital Planning Area. It is fair to assume residents of the planning area would prefer to receive the care they demand closer to home, and those that have increasingly filled Medical Center's beds do so because they seek the level of care that can be found at the Medical Center. Thus, the alternative of joint ventures with neighboring A-03 hospitals was not pursued.
4. Utilizing other facilities in A-03 would involve more than one such facility given the size of the proposed project. Thus, there is a 10% cost premium for a loss of economies of scale by dividing the work among multiple sites rather than just at the Medical Center. The cost of this alternative would be \$220 million.

TABLE NINE Summary of Alternatives Considered for Adult Emergency Department and Bernard Mitchell Hospital			
Adult Emergency Department Alternatives			
	Costs	Pros	Cons
Project of Lesser Scope	<i>\$40 million</i>	• Does not use up valuable shell space • Continue to use existing ambulance bays	• Lacks critical adjacencies • Combined Entrance
Joint Venture	<i>\$43 million</i>	• Share risk/losses • Benefit from expertise of partner	• Critical support facilities suboptimal • Physical staffing inefficiencies • Greater Cost
Utilize Existing Facilities	<i>\$23 million</i>	• No capital costs • Save operating losses	• May not be possible to accommodate 50,000 + visits elsewhere on South Side • Not all services available
Bernard Mitchell Hospital Alternatives			
	Costs	Pros	Cons
Project of Greater Scope	<i>\$367 million</i>	• Abundant Space	• High Costs
		• Good proximity to parking and CCD	• Use valuable site • Blocks CCD downtown view on most levels
Project of Lesser Scope	<i>\$148 million</i>	• Lower cost	• Higher ratio of infrastructure/Public Space to Revenue Generating Areas • Need to return for more beds • More costly long term
Joint Venture	<i>\$220 million</i>	• Share Risk/losses • Integrated with area providers	• Challenge to manage
Utilize Existing Facilities	<i>\$220 million</i>	• Less Cost to UCMC • Integrated with area providers	• Insufficiency of clinical resources in A-03 • Higher cost spreading improvements over more locations • Continuity of care would be disrupted
<i>Source: Page 313 and 317 of the Application for Permit</i>			

VIII. Size of the Project, Projected Utilization, Assurances

A) Criterion 1110.234 (a) – Size of the Project

The applicant is proposing 160,970/dgsf of reviewable space for this project. The applicants are in compliance with all of the State Board Standards. (See Table Ten below). (See *Application for Permit pages 318-382 for discussion of the size of the project and the space program*)

TABLE TEN Size of the Project					
Departments	Beds/Rooms/ Stations	Proposed GSF	State Standard		Met Standard?
			Beds/Rooms/ Stations	Total	
Adult Emergency	41 Stations	29,017/dgsf	900/dgsf	36,900 /dgsf	Yes
Radiology		1,671/dgsf		3,100/dgsf	Yes
General Radiographic			1,300/dgsf		
CT			1,800/dgsf		
Medical Surgical	168 beds	109,322/dgsf	660/dgsf	110,880/dgsf	Yes
ICU	20 beds	10,263/dgsf	685/dgsf	13,700/dgsf	Yes
Cancer Ancillaries					
Bone Marrow Transplant		5,290/dgsf	Not Applicable		
Cellular Therapy Facility		5,407/dgsf	Not Applicable		
Total		160,970/dgsf			

B) Criterion 1110.234 (b) –Projected Utilization

1. Adult Emergency Department

The applicant is proposing forty one (41) emergency department stations. The applicant has experienced a compounded annual growth in the number of Adult Emergency Department visits of 6.51% for the period CY 2009-2015 (6 Years). Based on this rate of growth, the Medical Center projects over the next six years visits will reach 83,520 in 2021. If the Level 1 Trauma Center Designation is approved the Medical Center expects to have 2,700 Level 1 Trauma visits per year. With these additional visits, the total in 2021 is expected to reach 86,220. This number of visits justifies 44 stations at the State Board standard of 2,000 annual visits per station. Reasons cited by the applicant for the modernization of this service is

- Long waits experienced by patients causing in year ending October 31, 2015 five thousand eleven (5,011) patients to leave without being seen;
- Gradual growth over the past 32 years has expanded capacity at the cost of an efficient layout;

- In 2013 average wait time a patient spent in the Medical Centers adult emergency department was seven (7) hours. The goal is to reduce this wait time to 4.5 hours.

2. Dedicated Imaging Facilities within the Proposed Emergency Department

The applicant is proposing two (2) radiographic imaging rooms and (1) CT Room to be located in the adult emergency department. This location in the Adult emergency department will benefit patients with greater access to CCD's resources and improve imaging turnaround times.

3. Medical Surgical Beds

The applicant is proposing one hundred sixty eight (168) additional medical surgical beds at the Medical Center. The applicant has had a compounded annual growth rate of 6.7% for the period CY 2009 to CY 2015. According to the applicant, that growth rate is expected to continue. According to the applicant significant and steady growth in medical surgical days is occurring because of the "broad range of clinical services and the Medical center's strong presence in the A-03 Hospital Planning Area." Reasons for the request for an increase in medical surgical beds are:

- Diversion rate continues to increase in the adult emergency department because of the lack of medical surgical beds.
- Patient transfers are increasing at the Medical Center from Northwest Indiana and South Bend representing the largest source of growth.
- Specialized services offered at the Medical Center leads to the care of acutely ill patients being seen at the Medical Center
- Expansion of key programs at the Medical Center over the past few years.
- Alleviate capacity constraints. The applicant stated *"in a recent twelve (12) month period the medical surgical beds exceeded ninety (90%) percent on 217 days and were 100% on forty seven (47) days."*

4. Intensive Care Beds

The applicant is proposing to add 20 ICU beds for a total of 146 ICU beds. According to the applicant in 1979 when Bernard Mitchell Hospital was approved (#79-255) the ratio of ICU beds to Medical Surgical beds was 16%. If this project should be approved the one hundred forty six (146) ICU beds will represent 29% of the approved five hundred six (506) medical surgical beds. The applicant states because of the recent trends in health care (i.e. greater scrutiny of admission and re-admission of patients and hospitals minimizing length of stay) today's patients are more acutely ill on average than in 1983. The applicant expects the compounded annual growth in patient days of 1.6% to continue for intensive care services.

Board Staff notes generally based upon the information submitted by the hospitals for the annual hospital survey higher ICU utilization is common in large hospitals, hospitals located in large metropolitan areas, teaching hospitals, and Level I or II trauma centers. Lower ICU utilization is common in small hospitals, hospitals located in rural areas, and hospitals with critical access designation. [See Application for Permit pages 401-403]

5. Cancer Ancillary Department

- **Bone Marrow Transplant**

The applicant is proposing three (3) stations. The State Board does not have a standard for these services. The applicant has experienced a growth in bone marrow transplants from 2010-2015 of approximately 8.9% per year. The applicant expects growth going forward of approximately 13.5% the midpoint of the rate of increase from 2012-2015. (See Application for Permit pages 404-405)

- **Cellular Therapy Facility**

The applicant is proposing one (1) cellular facility. The State Board does not have a standard for this service. (See Application for Permit pages 405-406)

C) Criterion 1110.234 (e) – Assurances

The applicant has provided the necessary assurance at *page 430 of the Application for Permit*. See Table Seven below for the historical and projected utilization being proposed by this project.

THE STATE BOARD STAFF FINDS THE PROPOSED PROJECT IS IN CONFORMANCE WITH THE REQUIREMENTS OF CRITERION SIZE OF THE PROJECT, PROJECTED UTILIZATION ASSURANCES (77 IAC 1110.234 (a) (b) (e))

TABLE ELEVEN Historical and Projected Utilization of the Services being Proposed by this Project ⁽¹⁾																
Medical Surgical							Adult Emergency Department					CT				
Year	Bed	Patient Days	ADC	Occupancy	# of Bed Justified		Year	Number of Stations	Historical	Projected	# of Stations Justified	Year	Units	Procedures	Procedures	No of Units Justified
2009	300	74,710	204.68	68.23%	228		2009		39,178			2013	8 Units	49,760		7
2010	300	75,080	205.70	68.57%	229		2010		42,738			2014	8 Units	51,032		7
2011	300	78,227	214.32	71.44%	239		2011		46,422			2015	8 Units	52,752		7
2012	300	83,529	228.85	76.28%	255		2012		46,644			2016	8 Units		53,931	8
2013	338	91,410	250.44	74.09%	279		2013	36	48,457		25	2017	8 Units		55,231	8
2014	338	109,468	299.91	88.73%	334		2014	36	52,322		27	2018	8 Units		56,528	9
2015	338	115,666	316.89	93.78%	353		2015	36	57,207		29	2019	8 Units		59,121	9
2016	506	117,978	323.23	63.88%	360		2016	36		60,931	31	2020	8 Units		60,390	9
2017	506	125,928	345.01	68.18%	384		2017	36		64,898	33	2021	8 Units		62,143	9
2018	506	134,416	368.26	72.78%	410		2018	41		69,123	35					
2019	506	152,714	418.39	82.69%	465		2019	41		76,323	39					
2020	506	159,771	437.73	86.51%	487		2020	41		81,115	41					
2021	506	167,181	458.03	90.52%	509		2021	41		86,220	44					
Intensive Care Beds						Radiographic										
Year	Beds	Patient Days	ADC	Occupancy	# of Bed Justified	Year	Units	Procedures	Procedures	No of Units Justified						
2009	114	28,437	77.91	68.34%	120	2013	20 Units	114,111		15						
2010	114	26,296	72.04	63.20%	121	2014	20 Units	120,133		16						
2011	114	25,953	71.10	62.37%	119	2015	20 Units	129,382		17						
2012	114	26,559	72.76	63.83%	122	2016	20 Units		133,092	17						
2013	114	27,006	73.99	64.90%	124	2017	20 Units		137,136	18						
2014	126	30,407	83.31	66.12%	139	2018	20 Units		141,288	18						
2015	126	31,014	84.97	67.44%	142	2019	20 Units		147,856	19						
2016	146	31,247	85.61	58.64%	143	2020	20 Units		152,162	20						
2017	146	31,685	86.81	59.46%	145	2021	20 Units		157,398	20						
2018	146	32,128	88.02	60.29%	147											
2019	146	32,578	89.25	61.13%	150											
2020	146	33,034	90.50	61.99%	151											
2021	146	33,497	91.77	62.86%	153											

Source: Information provided by the Applicant

1. Observation days included in patient days for medical surgical and intensive care services.

IX. Medical Surgical and Intensive Care Beds Expansion of Existing Category of Service

A) Criterion 1110.530 (c) (1) (2) – Planning Area Need

There is a calculated excess of five hundred fifty seven (557) medical surgical beds and twenty three (23) ICU beds in the A-03 Hospital Planning Area.

The purpose of the project is to provide service to the Medical Center's primary service area. The primary service area as defined by the applicant includes all of the A-03 Hospital Planning Area, extends south to Harvey, west to Argo and north to the South Loop. The A-03 Planning Area includes the City of Chicago Community Areas of Douglas, Oakland, Fuller Park, Grand Boulevard, Kenwood, Near South Side, Washington Park, Hyde Park, Woodlawn, South Shore, Chatham, Avalon Park, South Chicago, Burnside, Calumet Heights, Roseland, Pullman, South Deering, East Side, Garfield Ridge, Archer Heights, Brighton Park, New City, West Elsdon, Gage Park, Clearing, West Lawn, West Englewood, Englewood, Chicago Lawn and Greater Grand Crossing. The applicant has attested that for Medical Surgical discharges 57.3 % of the patients reside in the primary service area and 62.4% of the discharges for intensive care. (*Zip code of residence provided at the Application for Permit page 420*) (*See Application for Permit pages 410-411*)

THE STATE BOARD STAFF FINDS THE PROPOSED PROJECT IN CONFORMANCE WITH CRITERION PLANNING AREA NEED (77 IAC 1110.530 (c) (1) (2))

B) Criterion 1110.530 (c) (4) (A) (B) – Expansion of Medical Surgical and Intensive Care Beds

A) The applicant is proposing to add one hundred sixty eight (168) medical surgical beds at the Medical Center for a total of five hundred six (506) medical surgical beds and an additional twenty ICU beds (20) for a total of 146 ICU beds. To expand a category of service the applicant must document that the average annual occupancy rate has equaled or exceeded the State Board's Occupancy Standard of ninety percent (90%) for a bed complement of two hundred (200) plus medical surgical beds and sixty (60%) percent for intensive care beds no matter the number of beds for each of the last two years. Based upon CY 2014-2015 average utilization the applicant can justify a total of three hundred forty three (343) medical surgical beds and one hundred forty one (141) intensive care beds at the State Board's target occupancy for medical surgical and intensive care beds. (*See Application for Permit pages 412-416*)

TABLE TWELVE					
University of Chicago Medical Center					
Average Historical Utilization CY 2014-2015					
Medical Surgical and Intensive Care Beds					
Medical Surgical Beds					
	Beds	Patient Days	ADC	Occupancy	Number of Beds Justified
2014	338	109,468	300	88.73%	334
2015	338	115,666	317	93.76%	353
Average	338	112,567	308	91%	343
Intensive Care Beds					
2014	126	30,407	83	66.12%	139
2015	126	31,014	85	67.44%	142
Average	126	28,707	84	66.78%	141

B) The applicant did not provide referral letters to justify demand for the increase in beds but instead relied upon the six year (CY 2009-2015) historical compounded annual growth in the medical surgical and intensive care patient days to justify the number of beds being requested. As documented above the applicant believes that the inpatient days for medical surgical services will continue to grow at approximately 6.7% per year going forward (2021) and 1.2% for intensive care services. We note that the State Board Staff has relied upon historical growth in patient days for previously approved projects by the State Board.

THE STATE BOARD STAFF FINDS THE PROPOSED PROJECT IS NOT IN CONFORMANCE WITH CRITERION PLANNING AREA NEED (77 IAC 1110.530 (c) (1) (2))

C. Criterion 1110.530 (f) – Staffing

The applicant provided a narrative explanation of how the staffing levels will be met for the expansion at pages 418-419 of the application for permit. The narrative appears reasonable and the State Board Staff believes it meets the requirements of this criterion.

THE STATE BOARD STAFF FINDS THE PROPOSED PROJECT IN CONFORMANCE WITH CRITERION STAFFING (77 IAC 1110.530 (f))

D. Criterion 1110.530 (g) – Performance Requirements

The applicant has met the minimum bed capacity for both medical surgical beds (100 beds) and intensive care beds (4 beds) in the Chicago-Naperville-Arlington Heights, Illinois Metropolitan Statistical Area.

THE STATE BOARD STAFF FINDS THE PROPOSED PROJECT IN CONFORMANCE WITH CRITERION PERFORMANCE REQUIREMENTS (77 IAC 1110.530 (g))

E. Criterion 1110.530 (h) – Assurances

Sharon O’Keefe President of the Medical Center has attested “*that The University of Chicago Medical Center understands that it is expected to achieve and maintain the occupancy specified in 77 IAC 1110.234(e) (1) by the second year of operation after project completion. The University of Chicago Medical Center reasonably expects to meet this occupancy.*” (Application for Permit page 430)

THE STATE BOARD STAFF FINDS THE PROPOSED PROJECT IN CONFORMANCE WITH CRITERION ASSURANCES (77 IAC 1110.530 (h))

XI. Clinical Services Other than Categories of Service

A) Criterion 1110.3030(d) (2) – Necessary Expansion - Adult Emergency Department

1. Adult Emergency Department

The applicant must document if the proposed project is necessary to provide expansion to meet the requirements of patient service demand. The current location of the Adult Emergency Department is at the Bernard Mitchell Hospital with thirty six (36) stations and is proposing an Adult Emergency Department with forty one (41) stations adjacent to the Center for Care & Discovery. The applicant believes the growth in the adult emergency department visits of approximately 6.51% annually for the years CY 2009-2015 will continue until CY2021. Average historical utilization will justify twenty eight (28) stations at the State Board Standard of 2,000 visits per station and not the forty one (41) stations being proposed.

TABLE THIRTEEN Emergency Department			
Year	Stations	Patient Days	Number of Stations Justified
2014	36	52,322	27
2015	36	57,207	29
Average	36	54,765	28

2. Radiology

The applicant is proposing to relocate from the Bernard Mitchell Hospital two (2) radiographic rooms and one (1) CT room in the proposed Adult emergency department that will be adjacent to the Center for Care & Discovery. The applicant currently has 20 radiographic imaging rooms and 8 CT rooms. Based on the three (3) year historical utilization the applicant can justify sixteen (16) radiographic imaging units and 7 CT rooms. The State Board Standard is 8,000 procedures per unit for radiographic units and 7,000 visits for CT.

TABLE FOURTEEN Radiology			
Year	Units	Procedures	Number of Units Justified
Radiographic			
2013	20 Units	114,111	15
2014	20 Units	120,133	16
2015	20 Units	129,382	17
Average	20 Units	121,209	16
CT			
2013	8 Units	49,760	7
2014	8 Units	51,032	7
2015	8 Units	52,752	7
Average	8 Units	51,181	7

Cancer Ancillary Department

- **Bone Marrow Transplant**

The applicant is proposing three (3) stations. The State Board does not have a standard for these services. The applicant has experienced a growth in bone marrow transplants from 2010-2015 of approximately 8.9% per year. The applicant expects growth going forward of approximately 13.5% the midpoint of the rate of increase from 2012-2015. (See Application for Permit pages 443-445)

- **Cellular Therapy Facility**

The applicant is proposing one (1) cellular facility. The State Board does not have a standard for this service. (See Application for Permit pages 443-445)

THE STATE BOARD STAFF FINDS THE PROPOSED PROJECT NOT IN CONFORMANCE WITH CRITERION CLINICAL SERVICES OTHER THAN CATEGORIES OF SERVICE (77 IAC 1110.3030 (d) (2))

XII. FINANCIAL VIABILITY

A) Criterion 1120.120 - Availability of Funds

a) Cash and Securities

The cash part of the financing plan would total \$73 million. As of June 30, 2015 cash and cash Equivalents totaled \$164 million. Unrestricted Endowments totaled \$988 million. In the last four fiscal years the Excess of Revenue over Expenses has ranged from \$110 million to \$171 million and averaged \$141 million per year.

b) Debt

The debt part of the financing plan assumes \$200 million in tax-exempt bonds issued under the authority of the Illinois Finance Authority. The Medical Center is currently rated AA – by Standard & Poor's Ratings Services and Aa3 by Moody's Investors Service. (See Application for Permit pages 446-533)

TABLE FIFTEEN		
The University of Chicago Medical Center		
Years Ended June 30, 2015 and 2014		
Audited		
(in thousands)		
	2015	2014
Cash	\$163,969	\$79,698
Current Assets	\$443,117	\$320,553
Total Assets	\$2,802,568	\$2,657,042
Current Liabilities	\$317,750	\$250,325
Long Term Debt	\$868,008	\$831,035
Net Patient Service Revenue	\$1,493,816	\$1,409,095
Depreciation Expense	\$81,902	\$83,563
Interest Expense	\$35,632	\$46,071
Total Operating Expense	\$1,459,149	\$1,378,140
Operating Income	\$84,144	\$69,363
Excess of Revenues over Expenses	\$110,365	\$171,057

TABLE FIFTEEN The University of Chicago Medical Center Years Ended June 30, 2015 and 2014 Audited (in thousands)
<i>Source: Application for Permit Audited Financial Statement submitted for prior four years.</i>

THE STATE BOARD STAFF FINDS THE PROPOSED PROJECT IS IN CONFORMANCE WITH CRITERION AVAILABILITY OF FUNDS (77 IAC 1120.120)

B) Criterion 1120.130 – Financial Viability

The applicant is currently rated AA– by Standard & Poor's Ratings Services and Aa3 by Moody's Investors Service. (See *Application for Permit* pages 534) Because of this “A” or better bond rating the applicant did not have to provide financial ratio information.

THE STATE BOARD STAFF FINDS THE PROPOSED PROJECT IS IN CONFORMANCE WITH CRITERION FINANCIAL VIABILITY (77 IAC 1120.130)

XIII. ECONOMIC FEASIBILITY

A) Criterion 1120.140 (a) – Reasonableness of Financing Arrangements

B) Criterion 1120.140 (b) – Terms of Debt Financing

The applicant stated the following: “We propose to borrow \$200 million of the \$276 million cost of this project. The remainder is financed by cash and securities. The borrowing can be done at an average coupon rate of 4.76 percent is less costly than the earnings we would forego by selling investments. In the last three fiscal years, our yield on investments averaged 8.1 percent per year. In the event that investments must be liquidated to meet debt obligations, a sufficient amount to do so can be liquidated within a 60 day period.”

THE STATE BOARD STAFF FINDS THE PROPOSED PROJECT IS IN CONFORMANCE WITH CRITERION REASONABLENESS OF FINANCING ARRANGEMENTS AND TERMS OF DEBT FINANCING (77 IAC 1120.140 (a) (b))

C) Criterion 1120.140 (c) – Reasonableness of Construction Costs

Only the reviewable costs are being reviewed below. The itemization of these costs includes the total costs submitted for this project.

Preplanning Costs are \$466,267. These costs are less than one percent (1%) of new construction, contingencies and movable equipment not in construction contracts. This appears reasonable when compared to the State Board Standard of 1.8%.

Site Survey and Soil Investigation and Site Preparation are \$511,628. These costs are less than one percent (1%) of new construction and contingency. This appears reasonable when compared to the State Board Standard of five percent (5%). These costs include the following:

<u>Site Preparation</u>	
Earthwork	\$126,032
Paving	\$355,474
Demolition	\$81,532
Landscaping	\$201,500

	Other	<u>\$51,500</u>
Total		\$816,038

New Construction and Contingency is \$99,527,727 or \$618.30 GSF. This appears **HIGH** when compared to the State Board Standard of \$503.23 per GSF. The applicant provided an explanation for the difference in the cost and the State Board Standard which is provided below.

<u>New Construction</u>		
Construction		\$146,998,579
Material Testing		\$241,850
Security		\$904,700
Pneumatic Tube		\$484,200
Signage		\$525,000
Keys Locksets		\$253,900
Com Ed Vault		<u>\$75,000</u>
Relocation		
Total		\$149,483,229

Contingency Costs are \$9,047,975. These costs are ten percent (10%) of new construction. This appears reasonable when compared to the State Board Standard of ten percent (10%).

Architectural and Engineering Fees are \$5,354,592. These costs are 5.38% of new construction and contingency costs. This appears reasonable when compared to the State Board Standard of 3.59-5.39%

Consulting and Other Fees are \$2,796,774. The State Board does not have a standard for these costs. These costs include the following:

<u>Consulting and Other</u>		
Legal		\$88,000
Program Manager		\$763,250
IT Project Manager		\$1,067,350
Equipment Planner		\$506,000
CON Consultant		\$109,000
CON Fee		\$110,000
Scheduling Consultant		\$150,000
Traffic Consultant		\$40,000
Technology Security Consultant		\$175,000
Vibration Consultant		\$70,000
Code Consultant		\$105,000
Fire-Stop Consultant		\$75,000
Commissioning Consultant		\$810,000
Other Consultants		\$210,000
Developer Manager		\$62,000
City Permit Fees		\$135,000
IDPH Review Fees		\$115,000
Builders Risk Insurance		<u>\$30,000</u>
Total		\$4,620,600

Movable or Other Equipment not in Construction Contracts are \$47,891,801. The State Board does not have a standard for these costs. A listing of all medical equipment is provided at pages 294-295 of the application for permit. These costs include the following:

<u>Movable or Other Equipment</u>	
Adult Emergency	\$8,531,558
Radiology	\$3,423,264
Med-Surg	\$27,386,086
ICU	\$6,423,834
Cancer Ancillaries	\$2,127,059
Public	\$375,000
Staff/Support	<u>\$628,809</u>
Total	\$48,895,610

Bond Issuance Expenses are \$2,044,352. The State Board does not have a standard for these costs.

Net Interest Expenses during Construction is \$17,428,962. The State Board does not have a standard for these costs.

Other Costs to be Capitalized is \$7,180,601. The State Board does not have standard for these costs. The costs include the following:

<u>Other Costs to be Capitalized</u>	
Environmental Services	\$360,680
Movers	\$255,000
Warehousing	\$553,250
IT Systems	\$8,109,441
Plant Shutdowns	\$204,400
Asbestos Remediation	\$922,000
Art Works	\$248,400
Capitalized Staff	<u>\$1,210,029</u>
Salaries	
Total	\$11,863,200

Below is an explanation by the applicant for the difference between the State Board Standard and the applicant costs and the reason the Medical Center considers the project new construction (for cost purposes) rather than modernization.

“The Medical Center considers this Project as new construction rather than modernization. The Adult Emergency Department will be located in shell space in the recently completed Parking Garage north of the CCD. The remainder of the Project will be located in Bernard Mitchell, constructed in the early 1980s and opened in 1983. The building systems have seen scant improvement in the 33 years they have been in use. The construction will cost \$130 million of which \$26 million will be for building systems. Floors 3 through 6 will house the clinical departments and will require substantial (50%) demolition of existing walls for a completely revised patient room design. A good deal of the cost of this work is entailed by turning a 1983 building into one that will become a 2016 era hospital with greatly improved layouts and building systems that provide the correct environment for tertiary level specialty care for many patients who will be immune compromised. The Medical Center believes the new construction cost standard is much more applicable to this deep level of construction than would be the modernization standard.”

Construction Costs Exceeding Standard**Demolition \$20/sf**

- Demolition is extensive but not complete so it must be done selectively. There is limited space for dumpsters and restricted for dumpsters and restricted time for removal

Infection Control \$15/sf

- Project will be in clinically active hospital, done in many phases, in many small locations so numerous efforts must be made to contain dust and debris and monitor effectiveness of barriers

General Conditions/Design Contingency \$55/sf

- Higher costs than normal due to premium time working in an active hospital, many phases required, multiple scheduling and mobilizations and floor to ceiling heights of 12 feet versus modern 16 feet adds MEP installation difficulty

Economy of Scale \$15/sf

- Much of the work will occur in many small areas which requires more labor to install the same amount of material as compared to a project with fewer and much larger areas of work

Logistics \$10/sf

- There are a number of logistical issues that entail cordoning off space, staging, and swing space because of working in an active hospital

Smaller Existing Footprint \$16/sf

- BGSF per bed in Mitchell versus the recently built CCD are 44% smaller which means much of cost of the materials being installed has a smaller area to be applied against [see Application for Permit pages 535-541 for a complete discussion of the costs exceeding the State Standard]

The State Board Staff is in agreement with the applicant and believes the project qualifies as new construction because the proposed project is a substantial change in scope of the facility with the proposed addition of one hundred eighty eight (188) beds. (See 77 IAC 1130.140)

THE STATE BOARD STAFF FINDS THE PROPOSED PROJECT IS NOT IN CONFORMANCE WITH CRITERION REASONABLENESS OF PROJECT COSTS (77 IAC 1120.140 (c))

D) Criterion 1120.140 (d) - Direct Operating Costs

Below are the direct operating costs for the services to be modernized with this project. The State Board does not have a standard for these costs.

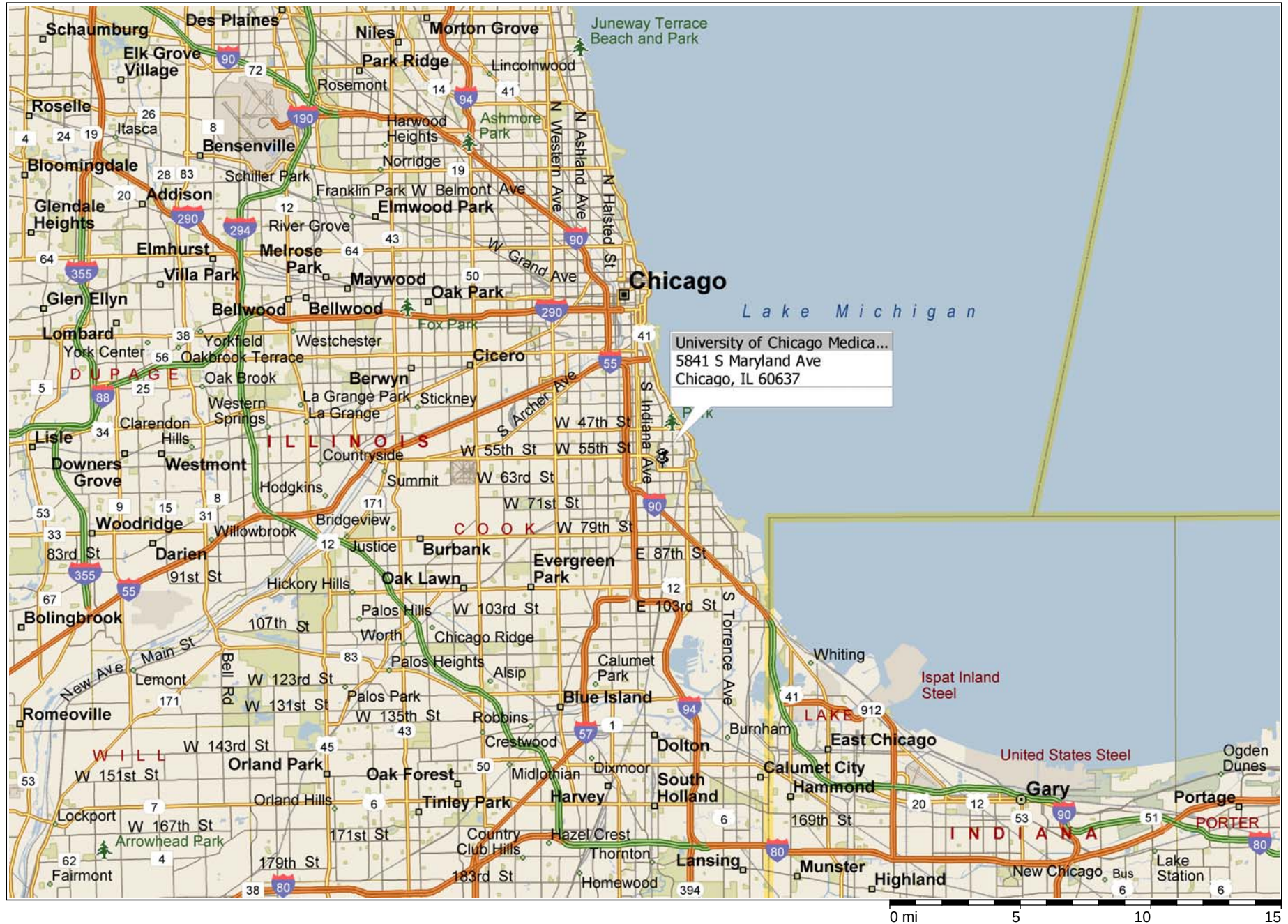
TABLE SIXTEEN							
Direct Operating Costs							
	Adult ED	Med Surg.	ICU	Radiology		Cancer Ancillaries	
				Gen Rad.	CT	BMT	Cell Facility
Compensation	\$17,637,046	\$83,863,484	\$33,339,089	\$5,094,264	\$3,029,415	\$338,647	\$1,054,976
Supplies Services	\$3,034,453	\$7,059,232	\$5,781,201	\$113,832	\$801,765	\$800,000	\$1,420,521
Other	\$425,211	\$917,799	\$475,751	\$47,593	\$7,386	\$7,922	\$33,118
Total Operating Costs	\$21,096,710	\$91,840,515	\$39,596,041	\$5,255,689	\$3,838,566	\$1,146,569	\$2,508,615
Annual Operating Costs	\$222	\$593	\$1,234	\$33	\$62	\$2,866	\$1,879

E) Criterion 1120.140 (e) - Projected Capital Costs

The projected capital costs related to this project is \$23.13. The State Board does not have a standard for these costs.

THE STATE BOARD STAFF FINDS THE PROPOSED PROJECT IS IN CONFORMANCE WITH CRITERION DIRECT OPERATING COSTS AND PROJECTED CAPITAL COSTS 77 IAC 1120.140 (d) (e))

16-008 University of Chicago Medical Center - Chicago



Ownership, Management and General Information			Patients by Race		Patients by Ethnicity	
ADMINISTRATOR NAME:	Sharon O'Keefe		White	39.0%	Hispanic or Latino:	6.2%
ADMINSTRATOR PHONE	773-702-8908		Black	54.2%	Not Hispanic or Latino:	91.8%
OWNERSHIP:	The University of Chicago Medical Center		American Indian	0.2%	Unknown:	1.9%
OPERATOR:	The University of Chicago Medical Center		Asian	2.6%		
MANAGEMENT:	Not for Profit Corporation (Not Church-R		Hawaiian/ Pacific	0.1%	IDPH Number:	3897
CERTIFICATION:	None		Unknown	3.7%	HPA	A-03
FACILITY DESIGNATION:	General Hospital				HSA	6
ADDRESS	5841 South Maryland	CITY: Chicago	COUNTY:	Suburban Cook (Chicago)		

Facility Utilization Data by Category of Service										
Clinical Service	Authorized CON Beds 12/31/2014	Peak Beds Setup and Staffed	Peak Census	Admissions	Inpatient Days	Observation Days	Average Length of Stay	Average Daily Census	CON Occupancy Rate %	Staffed Bed Occupancy Rate %
Medical/Surgical	338	338	336	16,821	104,146	4,329	6.4	297.2	87.9	87.9
0-14 Years				2	4					
15-44 Years				3,941	24,092					
45-64 Years				7,070	43,677					
65-74 Years				3,261	20,937					
75 Years +				2,547	15,436					
Pediatric	60	61	58	2,805	14,185	1,366	5.5	42.6	71.0	69.8
Intensive Care	126	109	107	6,253	30,070	158	4.8	82.8	65.7	76.0
Direct Admission				4,321	18,656					
Transfers				1,932	11,414					
Obstetric/Gynecology	46	44	24	1,903	6,225	268	3.4	17.8	38.7	40.4
Maternity				1,903	6,225					
Clean Gynecology				0	0					
Neonatal	47	47	47	755	14,449	1	19.1	39.6	84.2	84.2
Long Term Care	0	0	0	0	0	0	0.0	0.0	0.0	0.0
Swing Beds			0	0	0		0.0	0.0		
Acute Mental Illness	0	0	0	0	0	0	0.0	0.0	0.0	0.0
Rehabilitation	0	0	0	0	0	0	0.0	0.0	0.0	0.0
Long-Term Acute Care	0	0	0	0	0	0	0.0	0.0	0.0	0.0
Dedicated Observation	33					992				
Facility Utilization	617			26,605	169,075	7,114	6.6	482.7	78.2	

(Includes ICU Direct Admissions Only)

Inpatients and Outpatients Served by Payor Source							
	Medicare	Medicaid	Other Public	Private Insurance	Private Pay	Charity Care	Totals
Inpatients	33.6%	28.9%	0.0%	35.0%	0.0%	2.4%	
	8948	7701	0	9306	2	648	26,605
Outpatients	31.6%	18.5%	0.0%	44.7%	0.1%	5.2%	
	163946	95827	0	231726	309	26848	518,656

Financial Year Reported:	7/1/2013 to	6/30/2014	Inpatient and Outpatient Net Revenue by Payor Source					Charity Care Expense	Total Charity Care Expense
	Medicare	Medicaid	Other Public	Private Insurance	Private Pay	Totals			
Inpatient Revenue (\$)	25.8%	22.5%	0.0%	51.5%	0.2%	100.0%			22,628,000
	202,186,000	176,140,000	0	402,984,000	1,478,000	782,788,000	9,770,000		
Outpatient Revenue (\$)	18.0%	9.8%	0.0%	71.7%	0.5%	100.0%			Total Charity Care as % of Net Revenue
	112,985,000	61,135,000	0	449,179,000	3,006,000	626,305,000	12,858,000		1.6%

Birthing Data			Newborn Nursery Utilization			Organ Transplantation	
Number of Total Births:	1,735		Level I	Level II	Level II+	Kidney:	70
Number of Live Births:	1,675		Beds	31	24	Heart:	35
Birthing Rooms:	0		Patient Days	2,425	5,373	Lung:	25
Labor Rooms:	0		Total Newborn Patient Days		7,798	Heart/Lung:	0
Delivery Rooms:	0					Pancreas:	3
Labor-Delivery-Recovery Rooms:	8		Laboratory Studies			Liver:	29
Labor-Delivery-Recovery-Postpartum Rooms:	0		Inpatient Studies		3,382,709	Total:	162
C-Section Rooms:	3		Outpatient Studies		2,519,656		
CSections Performed:	512		Studies Performed Under Contract		85,897		

Surgery and Operating Room Utilization

<u>Surgical Specialty</u>	<u>Operating Rooms</u>				<u>Surgical Cases</u>		<u>Surgical Hours</u>			<u>Hours per Case</u>	
	Inpatient	Outpatient	Combined	Total	Inpatient	Outpatient	Inpatient	Outpatient	Total Hours	Inpatient	Outpatient
Cardiovascular	0	0	1	1	600	1	4455	3	4458	7.4	3.0
Dermatology	0	0	0	0	0	0	0	0	0	0.0	0.0
General	25	7	0	32	4659	5703	16830	11480	28310	3.6	2.0
Gastroenterology	0	0	0	0	11	26	43	65	108	3.9	2.5
Neurology	0	0	0	0	967	240	4902	712	5614	5.1	3.0
OB/Gynecology	0	0	0	0	2011	1005	2852	2498	5350	1.4	2.5
Oral/Maxillofacial	0	0	0	0	0	0	0	0	0	0.0	0.0
Ophthalmology	0	0	0	0	11	903	25	1309	1334	2.3	1.4
Orthopedic	0	0	0	0	1440	2091	5501	4846	10347	3.8	2.3
Otolaryngology	0	0	0	0	571	1624	2337	3836	6173	4.1	2.4
Plastic Surgery	0	0	0	0	723	610	3941	1956	5897	5.5	3.2
Podiatry	0	0	0	0	0	0	0	0	0	0.0	0.0
Thoracic	0	0	0	0	348	119	1759	267	2026	5.1	2.2
Urology	0	1	0	1	1036	1357	4768	2423	7191	4.6	1.8
Totals	25	8	1	34	12377	13679	47413	29395	76808	3.8	2.1
<u>SURGICAL RECOVERY STATIONS</u>				Stage 1 Recovery Stations		77	Stage 2 Recovery Stations		0		

Dedicated and Non-Dedicated Procedure Room Utilization

<u>Procedure Type</u>	<u>Procedure Rooms</u>				<u>Surgical Cases</u>		<u>Surgical Hours</u>			<u>Hours per Case</u>	
	Inpatient	Outpatient	Combined	Total	Inpatient	Outpatient	Inpatient	Outpatient	Total Hours	Inpatient	Outpatient
Gastrointestinal	0	0	13	13	2687	11457	2025	8637	10662	0.8	0.8
Laser Eye Procedures	0	0	1	1	0	514	0	514	514	0.0	1.0
Pain Management	0	0	1	1	133	3640	66	1820	1886	0.5	0.5
Cystoscopy	0	0	0	0	0	0	0	0	0	0.0	0.0
<u>Multipurpose Non-Dedicated Rooms</u>											
C-sections	0	0	3	3	512	0	1280	0	1280	2.5	0.0
	0	0	0	0	0	0	0	0	0	0.0	0.0
	0	0	0	0	0	0	0	0	0	0.0	0.0

Emergency/Trauma Care

Certified Trauma Center	Yes
Level of Trauma Service	Level 1
	Pediatric
Operating Rooms Dedicated for Trauma Care	0
Number of Trauma Visits:	0
Patients Admitted from Trauma	0
Emergency Service Type:	Comprehensive
Number of Emergency Room Stations	63
Persons Treated by Emergency Services:	82,987
Patients Admitted from Emergency:	11,132
Total ED Visits (Emergency+Trauma):	82,987

Free-Standing Emergency Center

Beds in Free-Standing Centers	
Patient Visits in Free-Standing Centers	
Hospital Admissions from Free-Standing Center	

Outpatient Service Data

Total Outpatient Visits	518,656
Outpatient Visits at the Hospital/ Campus:	502,829
Outpatient Visits Offsite/off campus	15,827

Cardiac Catheterization Labs

Total Cath Labs (Dedicated+Nondedicated labs):	5
Cath Labs used for Angiography procedures	0
Dedicated Diagnostic Catheterization Lab	0
Dedicated Interventional Catheterization Labs	0
Dedicated EP Catheterization Labs	2

Cardiac Catheterization Utilization

Total Cardiac Cath Procedures:	4,955
Diagnostic Catheterizations (0-14)	0
Diagnostic Catheterizations (15+)	2,131
Interventional Catheterizations (0-14):	0
Interventional Catheterization (15+)	443
EP Catheterizations (15+)	2,381

Cardiac Surgery Data

Total Cardiac Surgery Cases:	637
Pediatric (0 - 14 Years):	32
Adult (15 Years and Older):	605
Coronary Artery Bypass Grafts (CABGs) performed of total Cardiac Cases :	105

Diagnostic/Interventional Equipment**Examinations****Therapeutic Equipment****Therapies/**

	<u>Owned Contract</u>		<u>Inpatient Outpt</u>		<u>Contract</u>		<u>Owned Contract</u>		<u>Treatments</u>
General Radiography/Fluoroscopy	20	0	59,006	61,327	0	Lithotripsy	0	0	0
Nuclear Medicine	7	0	737	3,907	0	Linear Accelerator	4	0	20,247
Mammography	6	0	192	24,780	0	Image Guided Rad Therapy			17,090
Ultrasound	17	0	10,388	23,394	0	Intensity Modulated Rad Thrp			11,261
Angiography	7	0				High Dose Brachytherapy	1	0	158
Diagnostic Angiography			3,166	5,841	0	Proton Beam Therapy	0	0	0
Interventional Angiography			5,097	9,465	0	Gamma Knife	0	0	0
Positron Emission Tomography (PET)	1	0	164	1,330	0	Cyber knife	0	0	0
Computerized Axial Tomography (CAT)	8	0	16,440	34,592	0				
Magnetic Resonance Imaging	7	0	5,323	15,865	0				