

## EXECUTIVE SUMMARY

A2H, Inc. was commissioned by Regional One Health to provide Facility Condition and Seismic Risk Assessments of the one million square foot Regional One Health properties in midtown Memphis, Tennessee owned by Shelby County Healthcare Corporation. The purpose of the study evaluate the physical condition of the existing facilities, evaluate seismic risks, and identify costs for maintenance and replacement over the next 20 years. Project teams toured the entire campus identifying, cataloging, and evaluating over 1500 building assets and systems.

The project goals were achieved by application of industry standard research and site inspection protocols for such assessments. The project scope was substantially based on the ASTM Standards of Practice E2018 (Standard Guide for Facility Condition Assessments: Baseline Facility Condition Assessment Process).

The subject property is primarily a General Hospital. The age of the buildings vary as follows: Rout Women's Hospital - 65 years, Power Plant and Laundry – 80 years, Chandler – 59 years, Medplex – 27 years, Turner Tower – 30 years, Jefferson Pavilion – 40 years. Normal useful life for healthcare buildings is considered to be 50 years. Rout Women's Hospital, the Power Plant and Laundry and Chandler have exceeded normal useful life. Jefferson Pavilion will exceed useful life in 10 years.

This study has concluded that replacement costs for the existing facilities is \$820,590,000.00. Costs over the next twenty years for remedy of current deficiencies and lifecycle needs total \$547,750,000.00. Costs for seismic retrofits total \$568,000,000.00. Total costs for lifecycle need plus seismic retrofits total \$1.116 Billion.

Investments in the existing facilities in the last eleven years total \$200,000,000.00. The annual spend in the last eleven years has averaged \$18,181,818.00. This annual spend should be expected to continue in addition to the costs of remedy of current deficiencies, lifecycle need and seismic retrofits. In our opinion, the costs for ongoing deficiencies and lifecycle needs will continue to grow due to age and need to employ current advanced technologies.

Seismic risk to facilities and patients exists as these facilities and the Memphis Metropolitan Area are located in a seismic risk zone. The seismic risk cannot be feasibly mitigated by modifications to existing structures due to disruption of medical activities and the need to not occupy the facilities while under construction. Jefferson Tower is the greatest seismic risk, and this is reflected in retrofit costs. We have recommended consideration of replacement of all the existing facilities except for Turner Tower which was recently renovated and Medplex which is the most recently built. However, Turner Tower and Medplex should be seismically retrofitted. Seismic risk is also present in continuation of services and the ability to utilize all buildings due to the locations and conditions of the Central Energy Plant facilities in the Power Plant (Steam Boiler Systems) and Jefferson Pavilion (Chilled Water Systems) and the campus steam and chilled water distribution which will suffer appreciable damage or complete failure. A seismic event could discontinue chilled water and steam production and distribution to all facilities preventing patient care and building inhabitation.

Costs for this project are based on construction industry resources such as R.S. Means Construction Cost Data, CBRE Whitestone Cost Analytics, Marshall & Swift Building Cost Data, Bureau Veritas

Empirical Cost Data, United States City Cost Indexes, and assumptions regarding future economic conditions.

All cost values in the Opinions of Probable Costs are general estimates based on industry costing guides, firsthand knowledge of the associated system and components from industry specialists, and the professional judgment from A2H staff and Consultant. Costs may significantly differ based on individual contractors, exact scope of work requested, and other market factors.

Costs for each building are as follows:

LOCATION	TOTAL SYSTEMS EXPENDITURE FORECAST
Rout Women's Hospital	\$ 55,691,160.00
Power Plant & Laundry	\$ 32,571,170.00
Chandler	\$ 34,585,123.00
Medplex	\$135,137,045.00
Turner Tower	\$ 92,650,302.00
Jefferson Pavilion	\$127,976,950.00
Site	\$ 69,139,062.00
<b>Grand Total:</b>	<b>\$547,750,812.00</b>

LOCATION	SEISMIC RETROFIT VALUES
Rout Women's Hospital	\$ 114,135,081.00
Power Plant & Laundry	\$ 2,938,670.00
Chandler	\$ 53,576,148.00
Medplex	\$ 70,379,007.00
Turner Tower	\$ 26,320,603.00
Jefferson Pavilion	\$ 300,940,250.00
<b>Grand Total:</b>	<b>\$568,289,759.00</b>

**REPLACEMENT RESERVES REPORTS**

Costs over the next twenty years for remedy of current deficiencies and lifecycle need are as follows:

**02 - Rout Women's Hospital**

<b>ROUT WOMEN'S HOSPITAL</b>			
<b>YEAR</b>	<b>COST</b>	<b>YEAR</b>	<b>COST</b>
2022	\$240,300	2033	\$7,579,096
2023	\$0	2034	\$1,747,698
2024	\$11,420,960	2035	\$627,688
2025	\$295,036	2036	\$739,021
2026	\$1,150,585	2037	\$1,077,334
2027	\$583,057	2038	\$137,202
2028	\$2,406,493	2039	\$4,327,816
2029	\$1,575,837	2040	\$466,552
2030	\$7,959,560	2041	\$6,121,402
2031	\$182,603	2042	\$4,461,835
2032	\$2,591,084		

**03 - Power Plant & Laundry**

<b>POWER PANT &amp; LAUNDRY</b>			
<b>YEAR</b>	<b>COST</b>	<b>YEAR</b>	<b>COST</b>
2022	\$1,818,210	2033	\$48,587
2023	\$43,260	2034	\$127,891
2024	\$4,811,479	2035	\$118,951
2025	\$1,311,272	2036	\$26,319
2026	\$35,454	2037	\$16,826,048
2027	\$238,926	2038	\$0
2028	\$6,448	2039	\$210,738
2029	\$4,043,087	2040	\$0
2030	\$9,501	2041	\$97,320

<b>2031</b>	\$117,430	<b>2042</b>	\$2,458,504
<b>2032</b>	\$221,746		

**04 - Chandler**

<b>CHANDLER</b>			
<b>YEAR</b>	<b>COST</b>	<b>YEAR</b>	<b>COST</b>
<b>2022</b>	\$181,800	<b>2033</b>	\$614,974
<b>2023</b>	\$52,685	<b>2034</b>	\$1,990,861
<b>2024</b>	\$1,177,997	<b>2035</b>	\$217,857
<b>2025</b>	\$112,343	<b>2036</b>	\$247,399
<b>2026</b>	\$859,394	<b>2037</b>	\$3,716,220
<b>2027</b>	\$1,244,017	<b>2038</b>	\$1,207,622
<b>2028</b>	\$2,221,725	<b>2039</b>	\$519,159
<b>2029</b>	\$578,533	<b>2040</b>	\$2,126,577
<b>2030</b>	\$6,032,460	<b>2041</b>	\$26,829
<b>2031</b>	\$392,606	<b>2042</b>	\$2,343,836
<b>2032</b>	\$8,720,230		

**05 - Medplex**

<b>MEDPLEX</b>			
<b>YEAR</b>	<b>COST</b>	<b>YEAR</b>	<b>COST</b>
<b>2022</b>	\$119,505	<b>2033</b>	\$0
<b>2023</b>	\$0	<b>2034</b>	\$1,177,964
<b>2024</b>	\$16,091,126	<b>2035</b>	\$9,904,893
<b>2025</b>	\$5,672,728	<b>2036</b>	\$6,353
<b>2026</b>	\$1,957,017	<b>2037</b>	\$116,848
<b>2027</b>	\$6,087,928	<b>2038</b>	\$3,811,820
<b>2028</b>	\$2,500,191	<b>2039</b>	\$7,275,224
<b>2029</b>	\$123,233	<b>2040</b>	\$25,842,934
<b>2030</b>	\$18,325,096	<b>2041</b>	\$4,997,492
<b>2031</b>	\$27,009	<b>2042</b>	\$2,600,800
<b>2032</b>	\$10,885,723		

