

**New Hospital at St. Elizabeth East
Facilities Consulting Engagement**

Phase 1B – Part 2 Services

Addendum 1

106-Bed Option with Parking Garage #2 on Parcel StE-6

Final Report – March 2018



Prepared by:



Section 1.0

Project Overview

1.0 INTRODUCTION

The District of Columbia is seeking a sustainable, efficient solution for the long-term healthcare needs of all District residents with a focus on the communities in Wards 7 and 8, which are currently underserved by high-quality healthcare facilities.

In support of that effort, the District is seeking to build a new hospital east of the Anacostia River.

In July 2016, the District of Columbia Department of Health Care Finance, as fiduciary agent for United Medical Center, commissioned Healthcare Building Solutions, Inc. (HBS) to evaluate six potential building sites within Wards 7 and 8 for feasibility of locating and constructing a new healthcare campus to serve the citizens currently served by United Medical Center.

HBS submitted the Phase 1A – Site Evaluation and Recommendation Report in September 2016 ranking the six sites.

In March of 2017, HBS was asked to provide Phase 1B Services which would include the Conceptual Site Analysis of the three highest ranked sites.

In June of 2017, HBS submitted the Phase 1B Report which identified the St. Elizabeths East Site as the most viable location for the District to develop a new healthcare campus east of the Anacostia River.

In February of 2018 HBS submitted a draft report that provided additional analysis, conceptual renderings, preliminary budgets and construction schedules related to developing a 144-bed healthcare campus with two parking garages on parcels StE-1 and StE-2 on the St. Elizabeths East site. The Final Report was submitted on March 5, 2018.

Discussions based on the findings of that report resulted in HBS being tasked with investigating the option of reducing the initial bed count to 106-beds and relocating one of the garages to Parcel StE-6.

This addendum report provides site analysis, schedule and cost impacts of a 106-bed hospital and the relocated garage.



St. Elizabeths East Campus

1.1 PROGRAM UTILIZED FOR DETAILED SITE STUDIES

In keeping with the study objectives as originally stated, the site criteria should provide a healthcare campus east of the Anacostia River, serving all District residents with a focus on the communities in Wards 7 and 8.

The DC Health System Plan, updated in 2017, and the recently-commissioned Huron Study informed the program requirements for the new healthcare campus.

For this Addendum Report, HBS developed a revised “Strawman” Program that features 106 beds (reduced from 144) that also included core hospital functions, shared diagnostic and treatment facilities, physician offices and parking for hospital staff and visitors. HBS utilized the Huron Study and the DC Health Plan to assist in developing the “Strawman” Program.

This Addendum also places the 800-car Parking Garage for the Entertainment and Sports Arena on Parcel StE-6.

This program was cross-referenced and benchmarked against a number of other healthcare projects designed and developed by HBS.

HBS understands that the “Strawman” Program may not reflect the final mix of services and departments for the new healthcare campus. HBS also recognizes that any potential healthcare partner could influence the program for the new campus.

1.1.1 KEY PROGRAM COMPONENTS

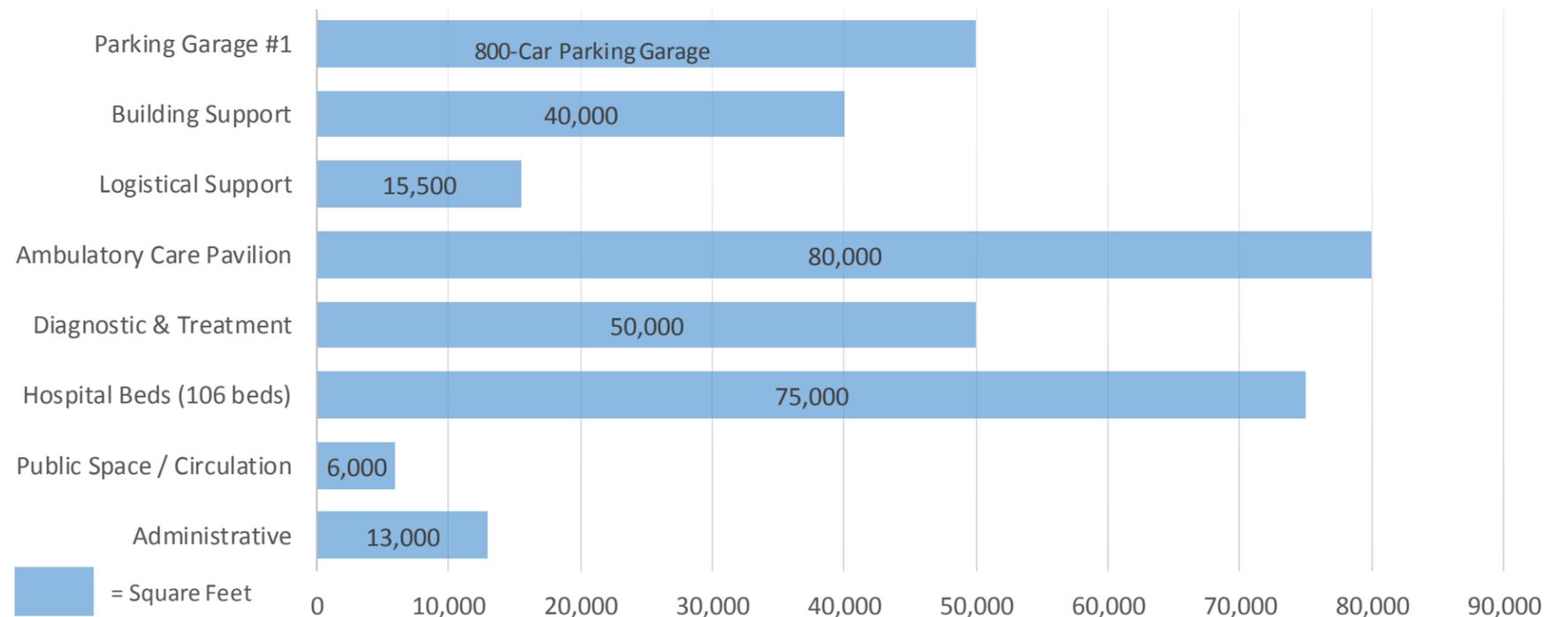
The “Strawman” Program requirements consisted of the following components:

- A. Hospital Beds: 106 private patient rooms
- B. Ambulatory Care Pavilion: 80,000 SF to include physician offices and exam rooms
- C. Diagnostic & Treatment Services: medical imaging, emergency department, surgery and procedure areas to be shared between hospital and ambulatory care pavilion
- D. Building Support: central utility plant and associated infrastructure support
- E. Logistical Support: Back of house services such as central sterile processing and housekeeping
- F. Administrative: Executive and administration offices
- G. Public Space / Circulation: Amenity areas including chapel, reception area, public corridors, food service
- H. Parking: 800 spaces for visitors, staff and patients

“STRAWMAN” PROGRAM ASSUMPTIONS:

- 180,000 to 200,000 SF Hospital Building
- 106 Private Patient Rooms
- 80,000 SF Ambulatory Pavilion
- 800-car Parking Garage
- 3 – 4 Stories

“STRAWMAN” PROGRAM COMPONENTS



Section 2.0

Detailed Site Study for 106-Bed Hospital

2.0 OVERVIEW

Following discussions with District Representatives after the Detailed Site Study was submitted, HBS was tasked with investigating the site, schedule and cost impacts of the following:

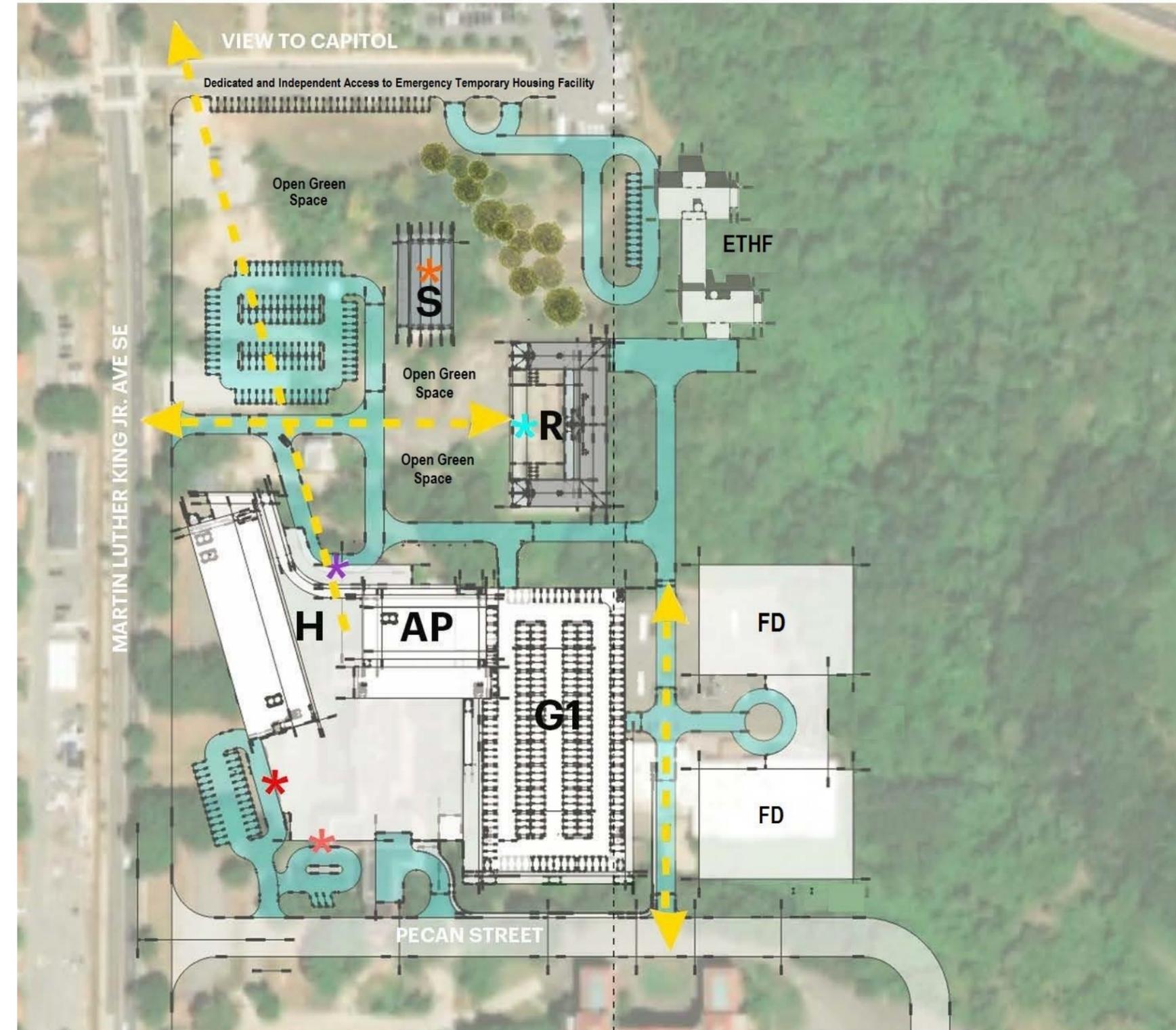
- Reduce the number of patient beds from 144 to 106 for the hospital. However, the hospital should be designed and engineered to accommodate a vertical expansion of two floors at a later date to provide 36 additional beds.
- Relocate Garage #2 (dedicated to ESA parking) to Parcel StE-6 instead of where the existing Emergency and Temporary Housing Facility, “801 East” is currently located.
- By siting Garage #2 on Parcel StE-6, it is much closer to the ESA and construction can begin without having to demolish the existing Emergency and Temporary Housing Facility, “801 East”, allowing Garage #2 to be opened much sooner.
- It should be acknowledged that the site plan information is for conceptual and visioning purposes only. The District acknowledges that the actual program will need input from many parties including potential operating partners.

2.1 KEY SITE PLAN FEATURES

This site plan is the result of several design iterations and offers the following key features and benefits:

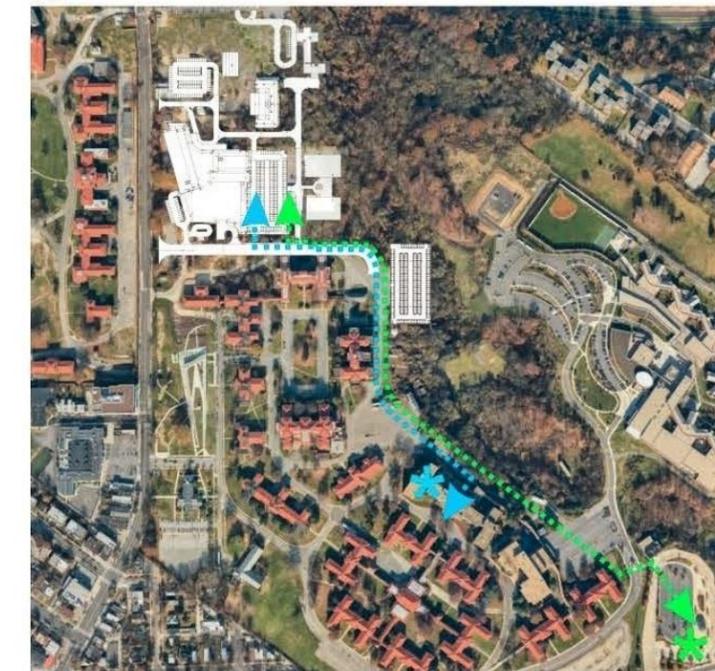
- The Hospital is sited to allow easy access and egress from MLK Boulevard and angled to provide views to the Capitol Building.
- The main entrances to both the Hospital and Ambulatory Pavilion features vehicular drop off zones for patients and visitors with easy access to the parking garage.
- Emergency Department features a dedicated ambulance and pedestrian walk in entrance with dedicated parking.
- The Hospital and Ambulatory Pavilion are connected to allow shared Diagnostic and Imaging Services.
- The Ambulatory Pavilion connects to a dedicated 800-vehicle Parking Garage (G1) for easy access by patients and staff.
- The relocation of Garage #2 to Parcel StE-6 creates additional space for future development of additional healthcare-oriented space.
- The site plan was developed to preserve as much green space and the historic buildings on Parcel StE-1.
- The existing historic Horse Stable is to remain in its location and be renovated and restored as appropriate to provide retail and food concession space.
- The existing historic Dry Barn is to remain in its location and be renovated and restored as appropriate to provide storage space or for future community use.
- The site plan provides for site wide circulation independent of main streets.
- Hospital and Ambulatory Pavilion were sited at South end of Parcel StE-2 to provide visual and pedestrian link to Maple Quad.
- Height restrictions on Parcel StE-1 limits buildings to two stories, and only 10,000 SF of available building development.
- A new Emergency and Temporary Housing Facility will be constructed at the NE corner of Parcel StE-2.
- A dedicated access road for the new Emergency and Temporary Housing Facility provides access to public transportation on MLK Boulevard and is independent from the site wide circulation.
- The relocation of Garage #2 to Parcel StE-6 places it much closer to the ESA. The walking distance from ESA to Garage #2 is .2 miles.
- Parcel StE-6 is large enough to accommodate Garage #2 and still have available land for future retail/food mixed use and amenity space with adjacency to both the Maple Quad and the ESA.

2.2 HOSPITAL SITE PLAN



2.2.1 LEGEND

- H** HOSPITAL
- AP** AMBULATORY PAVILION
- R** RETAIL PAVILION
- ETHF** EMERGENCY TEMPORARY HOUSING FACILITY
- G1** PARKING GARAGE - HOSPITAL/ AMBULATORY | 700 CARS
- S** STORAGE | EQUIPMENT OUT BUILDING
- FD** FUTURE DEVELOPMENT
- *** MAIN ENTRY
- *** ED WALK-IN ENTRY
- *** AMBULANCE ENTRY
- *** HISTORIC BUILDING - HORSE BARN
- *** HISTORIC BUILDING - DRY BARN



* WALKING DISTANCE TO NEW ARENA FROM G1 = .3 MILES N
* WALKING DISTANCE TO METRO FROM G1 = .5 MILES NTS

SITE PLAN

2.3 PRELIMINARY HOSPITAL PERSPECTIVES

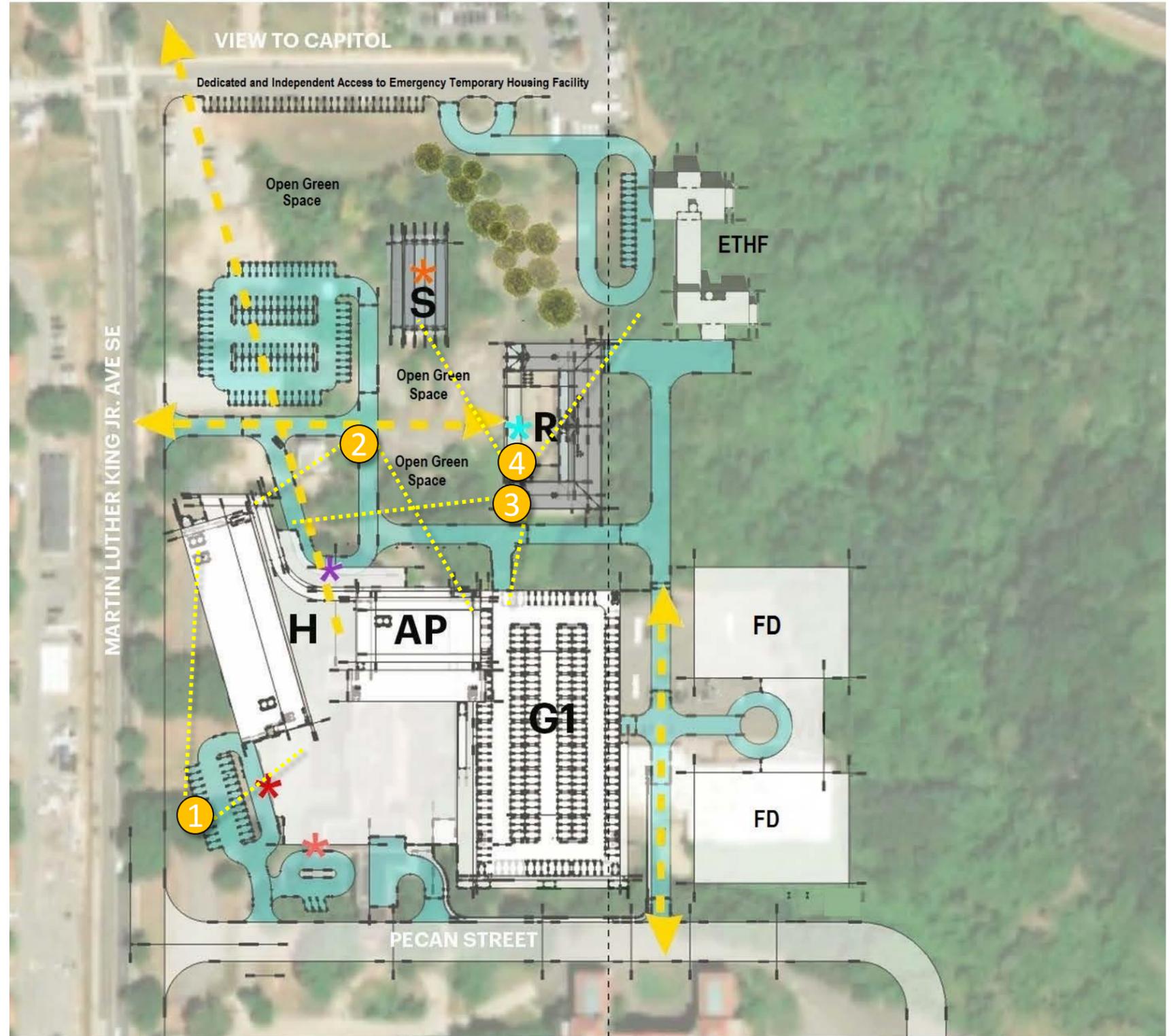
Recognizing the District is considering working with an independent operator for the new hospital, HBS prepared preliminary renderings for the new Hospital and Ambulatory Pavilion.

Please note, these renderings are for illustrative purposes only to show massing, scale and potential program adjacencies and are not intended to represent the final design, materials or program.

We have prepared this view legend to facilitate orientation on the site for each rendering.

- | | |
|---|--|
| H | HOSPITAL |
| AP | AMBULATORY PAVILION |
| R | RETAIL PAVILION |
| ETHF | EMERGENCY TEMPORARY HOUSING FACILITY |
| G1 | PARKING GARAGE - HOSPITAL/ AMBULATORY 700 CARS |
| S | STORAGE EQUIPMENT OUT BUILDING |
| FD | FUTURE DEVELOPMENT |
|  | MAIN ENTRY |
|  | ED WALK-IN ENTRY |
|  | AMBULANCE ENTRY |
|  | HISTORIC BUILDING - HORSE BARN |
|  | HISTORIC BUILDING - DRY BARN |

2.3.1 VIEW LEGEND



2.3.2 PERSPECTIVES OF NEW HOSPITAL AND AMBULATORY PAVILION



View of New Hospital Building from MLK Boulevard



View of Ambulatory Pavilion (on left) and New Hospital (on right) from Front Parking Lot

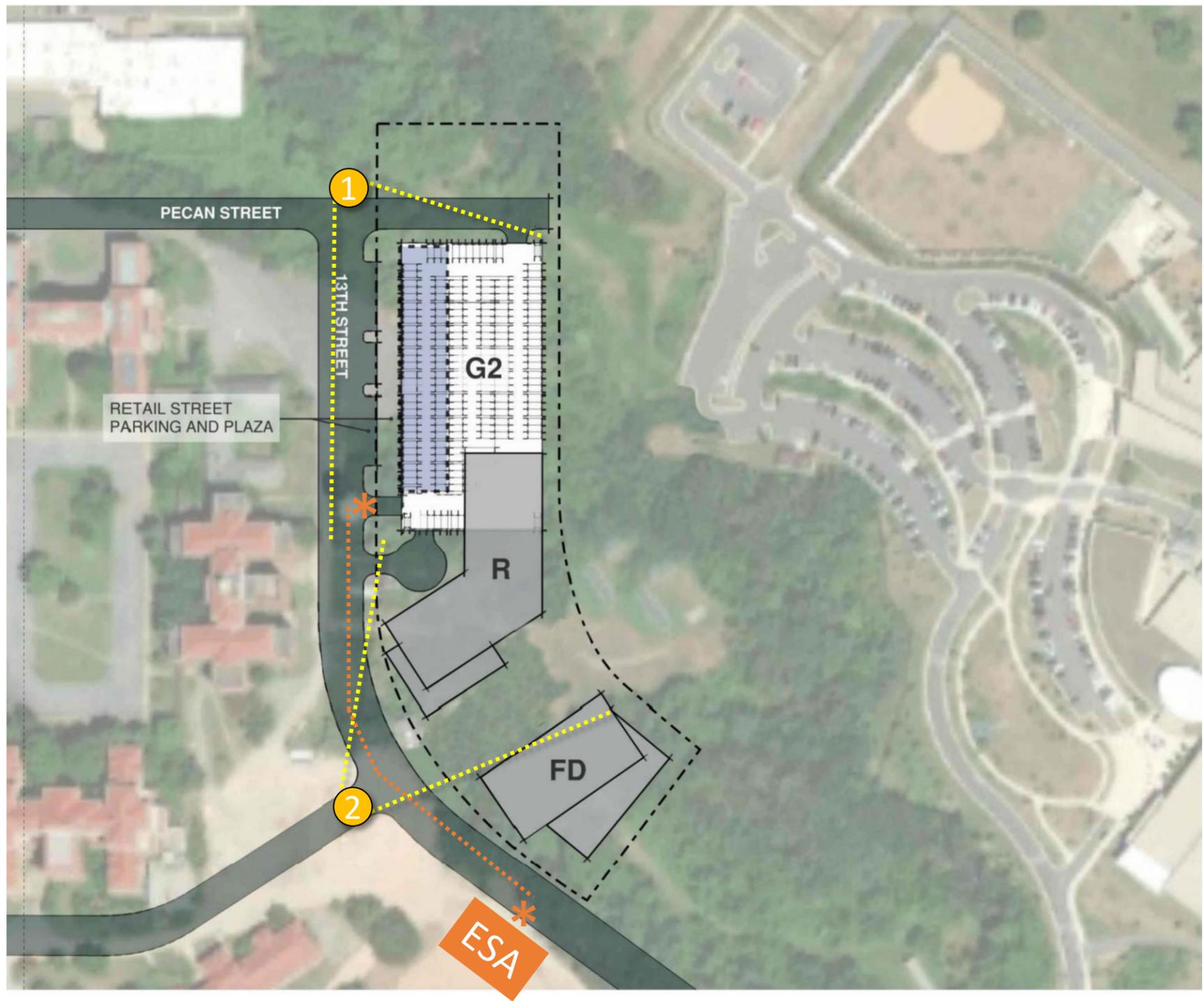


View of Ambulatory Pavilion (on left) and New Hospital (on right) from Renovated Stable Building



View of Renovated Stable (on right) and Renovated Dry Barn (on left) from Ambulatory Pavilion

2.4 PARKING GARAGE #2 SITE PLAN



2.4.1 LEGEND

- G2** PARKING GARAGE - ARENA | 807 CARS
- R** RETAIL / RESIDENTIAL / OFFICE
- FD** FUTURE DEVELOPMENT
-  RETAIL AT STREET LEVEL
-  PARCEL 6 BOUNDARY

PARKING GARAGE

- 145 - LEVEL 03
- 201 - LEVEL 02
- 60 - LEVEL 01 STREET LEVEL
- 201 - LOWER LEVEL
- 201 - LOWER LEVEL
- 808 - TOTAL SPACES**



 WALKING DISTANCE TO NEW ARENA FROM G2 = .2 MILES



SITE PLAN

2.4.2 PERSPECTIVES OF GARAGE #2 AND FUTURE DEVELOPMENT



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Section 3.0

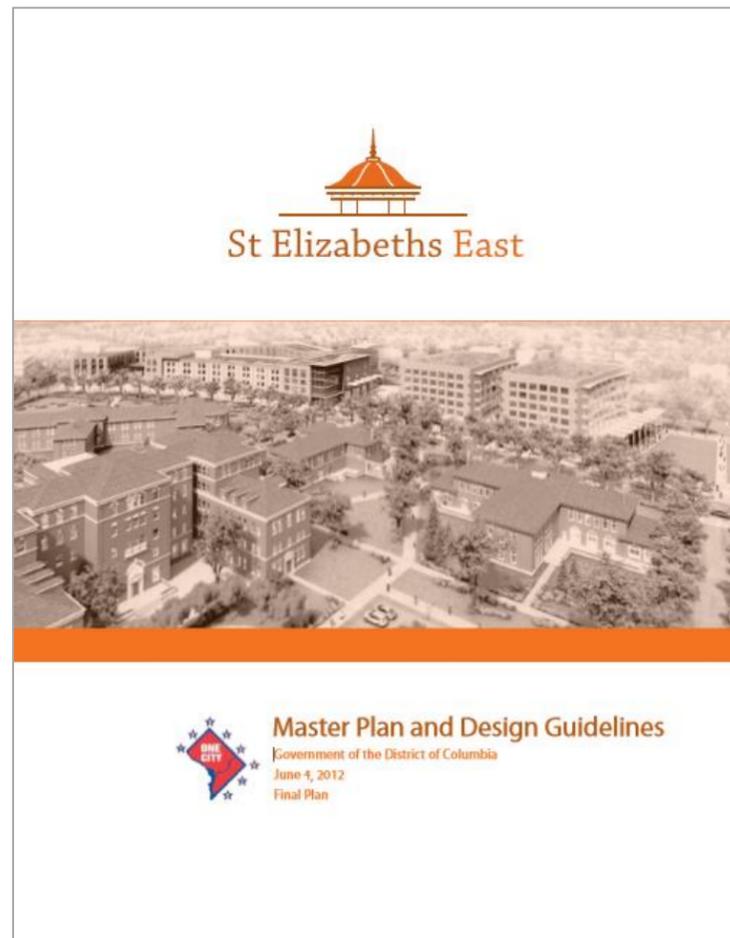
Cost and Schedule Impact

3.0 OVERVIEW

This section provides preliminary cost estimates and scheduling information that has been developed based on a 106-bed hospital. HBS understands that a potential operating partner might drive program changes for the facility.

The project cost estimates and schedule were developed based on benchmark information from other healthcare campus development projects designed and developed by HBS. These estimates are all in line with the industry standards as provided by Huron consulting in their report to the District.

These budget figures and schedule durations are provided for informational and planning purposes only.



3.1 KEY ITEMS IMPACTING DEVELOPMENT AND CONSTRUCTION

Any redevelopment on Parcels StE-1 and StE-2 must comply with the parameters detailed in the St. Elizabeths East Master Plan and Design Guidelines dated June 4, 2012.

This document was the result of a decade of assessment, outreach, analysis and planning to address an historic campus that is one of the District's largest underdeveloped sites. It was developed to guide future land use, infrastructure, sustainable development, historic revitalization, and open space.

As a result, there are key items impacting the development and construction of a new health campus. There are several components to be constructed as part of the new healthcare campus. Both parcels feature existing structures that must be demolished, relocated and/or renovated, therefore the construction sequencing must be addressed.

We have summarized the key items impacting development and construction below by developing the following narrative and supporting schedules.

3.2 EXECUTIVE SUMMARY SCHEDULE

While not directly associated with the new health campus, the need to provide adequate parking for the Entertainment and Sports Arena (ESA) is one of the key drivers of the healthcare campus construction sequencing.

The campus-wide infrastructure upgrade is currently underway, with the first phase to be completed in 2018 prior to the ESA opening. The second phase of the infrastructure upgrades will widen and connect Pecan Street to 13th Street, and provide a direct pedestrian and vehicular corridor from the Congress Heights Metro Station to the new healthcare campus.

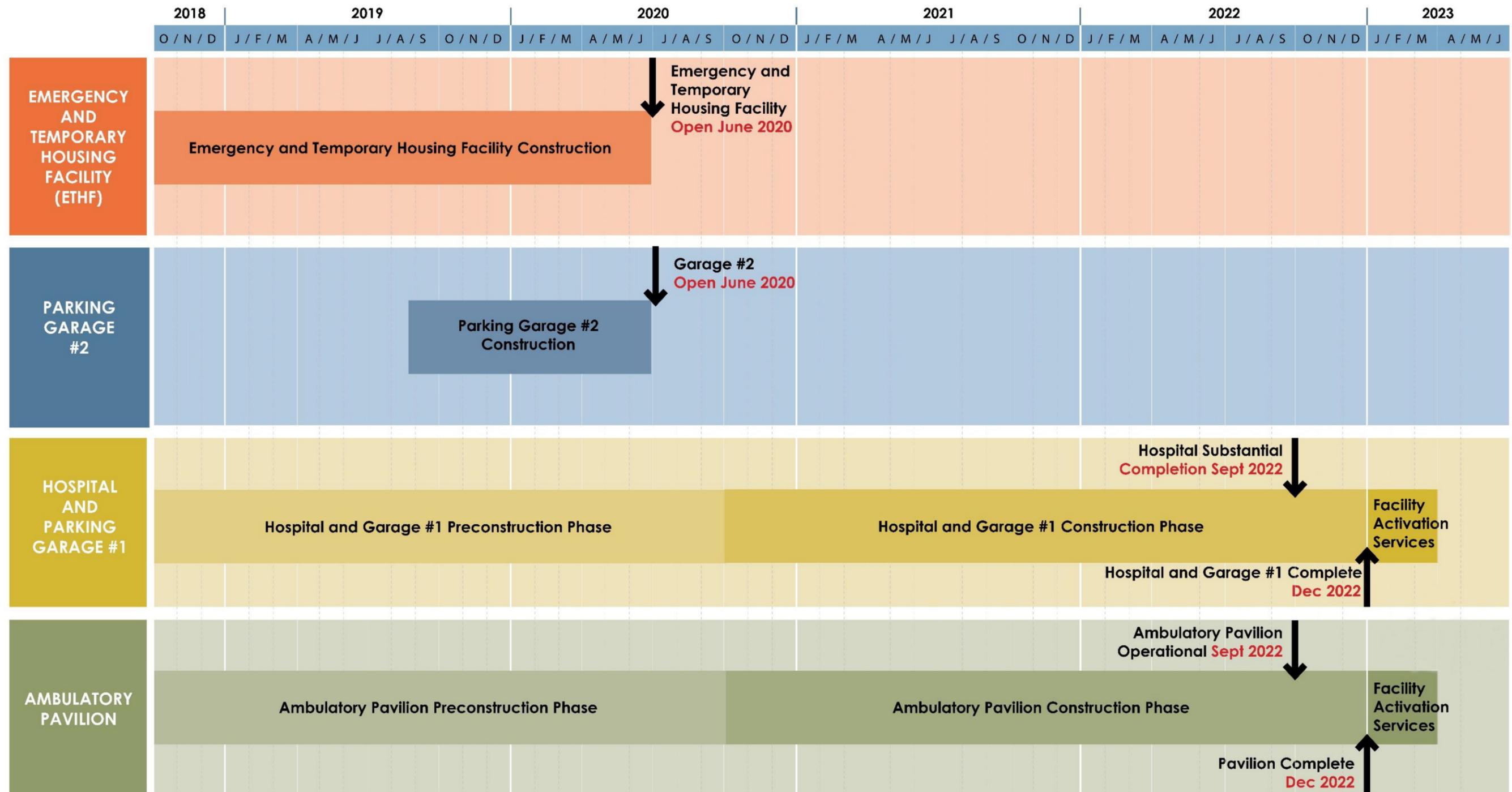
There is a temporary parking lot being constructed on StE-2 following the demolition of the Dix Pavilion.

This interim parking solution will remain in place while a new Parking Garage (#2) is constructed on Parcel StE-6 concurrent with the construction of the new Emergency Temporary Housing Facility.

Both the new Emergency Temporary Housing Facility and Parking Garage #2 will be completed by June 2020.

The Hospital and the Ambulatory Care Pavilion will be connected to Garage #1 and construction will begin simultaneously on all three in the Fall of 2020 with the first patient scheduled for March 2023.

3.2 EXECUTIVE SUMMARY SCHEDULE



3.3 PRELIMINARY PROJECT BUDGET

In this section we have provided preliminary project budget estimates for the new health campus including the 106-bed Hospital, the Ambulatory Pavilion and Garage #1, as well as costs for Garage #2.

The budget estimates were developed based on benchmark information from other healthcare campus development projects designed and developed by HBS.

These budget estimates are provided for informational and planning purposes only.

It does not include costs for the renovation, remediation or preservation of the historic buildings on Parcel StE-1.

Executive Summary Budget	Cost
Soft Costs	\$22,718,850
Permits, Printing & Insurance	\$11,270,000
Construction	\$126,750,000
Testing & Inspection	\$1,900,000
Furniture, Fixtures & Equipment	\$44,375,000
Subtotal of All Costs	\$207,013,850
Contingency @ 10% of Subtotal	\$20,701,385
Garage #2 Construction Costs	\$20,443,500
TOTAL COST	\$248,158,735

Soft Costs	Cost
Land Costs By Owner	\$0
Legal Costs By Owner	\$0
Architect / Engineers	\$12,000,000
<ul style="list-style-type: none"> Structural HVAC / Fire Protection Electrical Plumbing Civil Landscape Architecture 	
Physicst	\$6,000
Equipment Planning	\$475,000
Interior Design	\$425,000
Furniture Design	In Above
Art Consultant	in Art Costs
Signage Wayfinding	\$85,000
Soils Engineer	\$176,000
Miscellaneous Fees (If Required)	\$150,000
<ul style="list-style-type: none"> LEED Certification Pneumatic Tube Code Consultant Helipad Design Laboratory Consultant Surveyor 	
Construction Administration	\$9,401,850
Subtotal Soft Costs	\$22,718,850

Permits, Printing & Insurance	Cost
DERA / Zoning / Health / SHPDA / SHCG	\$200,000
Building Permit	\$800,000
Water / Sewer / Gas / Electric	\$9,000,000
Builders Risk	\$300,000
Bond	\$970,000
Plan Review Fees	In Permit Costs
Subtotal Permits & Insurance	\$11,270,000

Construction	Cost
Site Work and Remediation of Site	\$6,000,000
Hospital (200,000 SF)	\$78,800,000
<ul style="list-style-type: none"> 106 Inpatient Beds ICU / CCU Emergency Room / Urgent Care Shared Diagnostic & Testing Shared Surgery with Ambulatory Pavilion 	
Ambulatory Pavilion (80,000 SF)	\$22,500,000
<ul style="list-style-type: none"> PT / OT Out Patient Imaging Laboratory Ambulatory Surgery Center Pharmacy Shared with Hospital Physician Offices 	
Parking Garage #1 (800 Cars)	\$16,000,000
Offsite Improvements	\$1,500,000
Utility Connections	\$1,950,000
Subtotal Construction Costs	\$126,750,000

Testing & Inspection	Cost
Concrete	\$1,300,000
LEED Certification	\$600,000
Subtotal Testing & Inspection	\$1,900,000

Furniture, Fixtures & Equipment	Cost
Major Medical Including Radiology	\$26,000,000
Furniture	\$2,750,000
Kitchen	\$1,600,000
Lab Casework and Equipment	in Construction Costs
Pharmacy Casework and Equipment	in Construction Costs
EMS Equipment	\$50,000
Tube Systems	in Construction Costs
Signage	\$550,000
Art	\$450,000
Special Systems	\$2,800,000
<ul style="list-style-type: none"> Overhead Paging OR Cameras IP Access Control Security Video Integration Teleded Nurse Call Bed Management Cable 	
IT / IS Systems	\$9,800,000
<ul style="list-style-type: none"> Network Equipment Wireless Access Network Appliances Workstation Equipment (PCs, Printers, Arms, Cabinets) Telephone Equipment Cabling, Racks Time Clocks, EMS Cables 	
Equipment Installation and Move in	\$375,000
Subtotal FF&E Costs	\$44,375,000

Owner Contingency	Cost
Owner Contingency	\$20,701,385
Subtotal	\$20,701,385

Garage #2 800 Cars on Parcel StE-6	Cost
Soft Costs	\$1,280,000
Construction	\$18,000,000
Permits, Printing & Insurance	\$50,000
Testing & Inspection, Soils Testing	\$100,000
Construction Administration	\$40,000
Subtotal of All Costs	\$19,470,000
Contingency @ 5% of Subtotal	\$973,500
TOTAL COST	\$20,443,500

**New Hospital at St. Elizabeth East
Facilities Consulting Engagement**

Phase 1B – Part 2 Services

144-Bed Option with Parking Garage #2 on Parcel StE-6

Final Report – March 2018



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1.1 PROGRAM UTILIZED FOR DETAILED SITE STUDIES

In keeping with the study objectives as originally stated, the site criteria should provide a healthcare campus east of the Anacostia River, serving all District residents with a focus on the communities in Wards 7 and 8.

The DC Health System Plan, updated in 2017, and the recently-commissioned Huron Study informed the program requirements for the new healthcare campus.

To complete the Detailed Site Analysis, HBS developed a “Strawman” Program that included core hospital functions, shared diagnostic and treatment facilities, physician offices and parking for hospital staff and visitors. HBS utilized the Huron Study and the DC Health Plan to assist in developing the “Strawman” Program.

The need to provide 800 parking spaces for the Entertainment and Sports Arena was also factored into the Detailed Site Studies.

This program was cross-referenced and benchmarked against a number of other healthcare projects designed and developed by HBS.

HBS understands that the “Strawman” Program may not reflect the final mix of services and departments for the new healthcare campus. HBS also recognizes that any potential healthcare partner could influence the program for the new campus.

1.1.1 KEY PROGRAM COMPONENTS

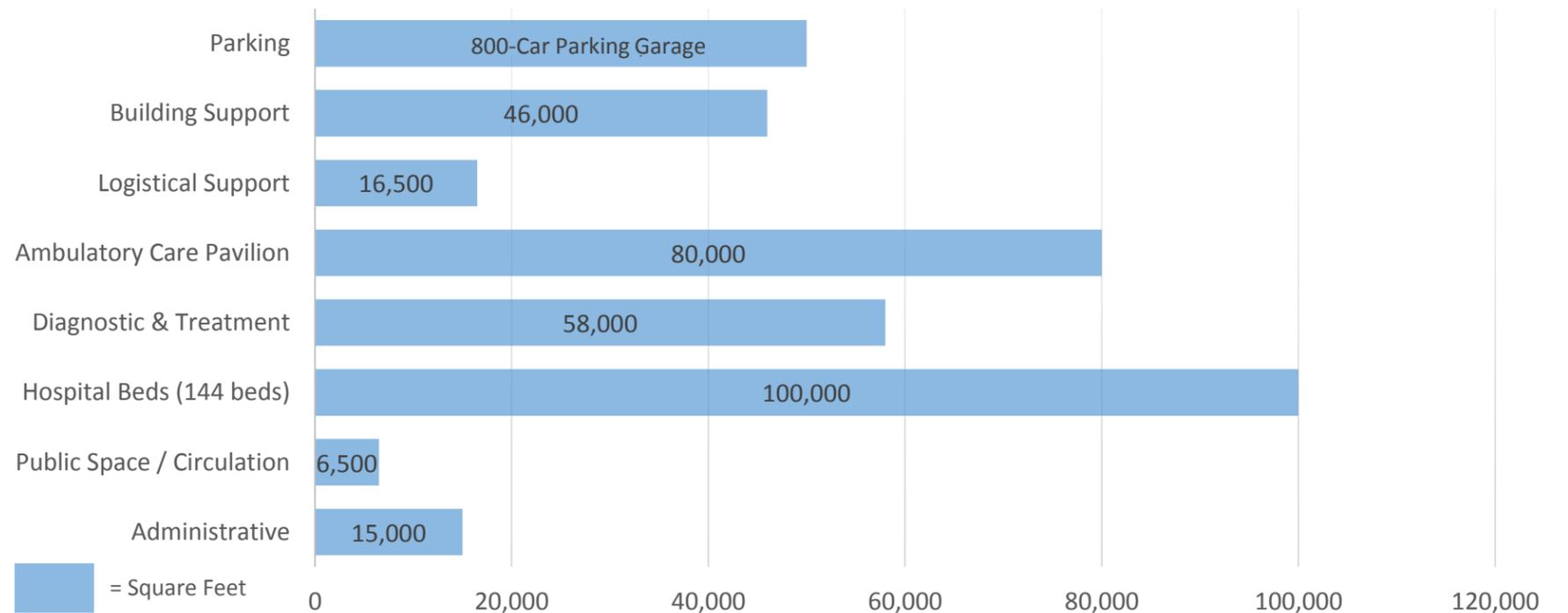
The “Strawman” Program requirements consisted of the following components:

- A. Hospital Beds: 144 private patient rooms
- B. Ambulatory Care Pavilion: 80,000 SF to include physician offices and exam rooms
- C. Diagnostic & Treatment Services: medical imaging, emergency department, surgery and procedure areas to be shared between hospital and ambulatory care pavilion
- D. Building Support: central utility plant and associated infrastructure support
- E. Logistical Support: Back of house services such as central sterile processing and housekeeping
- F. Administrative: Executive and administrative offices
- G. Public Space / Circulation: Amenity areas including chapel, reception area, public corridors, food service
- H. Parking: 800 spaces for visitors, staff and patients

“STRAWMAN” PROGRAM ASSUMPTIONS:

- 200,000 to 250,000 SF Hospital Building
- 144 Private Patient Rooms
- 80,000 SF Ambulatory Pavilion
- 800-car Parking Garage
- 4 – 5 Stories

“STRAWMAN” PROGRAM COMPONENTS



3.4.2 EXECUTIVE SUMMARY BUDGET

The chart below provides an overview of the preliminary budget estimate for the new healthcare campus including the new Hospital, Ambulatory Pavilion, and Parking Garage #1 with associated site upgrades.

It does not include costs for the renovation, remediation or preservation of the historic buildings on Parcel StE-1 or the costs for Garage #2.

Executive Summary Budget	Cost
Soft Costs	\$22,783,850
Permits, Printing & Insurance	\$11,270,000
Construction	\$141,550,000
Testing & Inspection	\$1,900,000
Furniture, Fixtures & Equipment	\$45,150,000
Subtotal of All Costs	\$222,653,850
Contingency @ 10% of Subtotal	\$22,265,385
Garage #2 Construction Costs	\$18,343,500
TOTAL COST	\$263,262,735

3.4.3 DETAILED PRELIMINARY BUDGET BY COMPONENT

Below find a breakdown of each major component for the new hospital campus.

Soft Costs	Cost
Land Costs By Owner	\$0
Legal Costs By Owner	\$0
Architect / Engineers	\$12,000,000
<ul style="list-style-type: none"> • Structural • HVAC / Fire Protection • Electrical • Plumbing • Civil • Landscape Architecture 	
Physicst	\$6,000
Equipment Planning	\$500,000
Interior Design	\$450,000
Furniture Design	In Above
Art Consultant	in Art Costs
Signage Wayfinding	\$100,000
Soils Engineer	\$176,000
Miscellaneous Fees (If Required)	\$150,000
<ul style="list-style-type: none"> • LEED Certification • Pneumatic Tube • Code Consultant • Helipad Design • Laboratory Consultant • Surveyor 	
Construction Administration	\$9,401,850
Subtotal Soft Costs	\$22,783,850

Permits, Printing & Insurance	Cost
DERA / Zoning / Health / SHPDA / SHCG	\$200,000
Building Permit	\$800,000
Water / Sewer / Gas / Electric	\$9,000,000
Builders Risk	\$300,000
Bond	\$970,000
Plan Review Fees	In Permit Costs
Subtotal Permits & Insurance	\$11,270,000

Construction	Cost
Site Work and Remediation of Site	\$6,000,000
Hospital (250,000 SF)	\$93,600,000
<ul style="list-style-type: none"> • 144 Inpatient Beds • ICU / CCU • Emergency Room / Urgent Care • Shared Diagnostic & Testing • Shared Surgery with Ambulatory Pavilion 	
Ambulatory Pavilion (80,000 SF)	\$22,500,000
<ul style="list-style-type: none"> • PT / OT • Out Patient Imaging • Laboratory • Ambulatory Surgery Center • Pharmacy Shared with Hospital • Physician Offices 	
Parking Garage #1 (800 Cars)	\$16,000,000
Offsite Improvements	\$1,500,000.00
Utility Connections	\$1,950,000
Subtotal Construction Costs	\$141,550,000

Testing & Inspection	Cost
Concrete	\$1,300,000
LEED Certification	\$600,000
Subtotal Testing & Inspection	\$1,900,000

3.4.4 PRELIMINARY BUDGET FOR PARKING GARAGE #2

Furniture, Fixtures & Equipment	Cost
Major Medical Including Radiology	\$26,000,000
Furniture	\$3,000,000
Kitchen	\$1,600,000
Lab Casework and Equipment	in Construction Costs
Pharmacy Casework and Equipment	in Construction Costs
EMS Equipment	\$50,000
Tube Systems	in Construction Costs
Signage	\$600,000
Art	\$500,000
Special Systems	\$3,000,000
<ul style="list-style-type: none"> • Overhead Paging • OR Cameras • IP Access Control • Security • Video Integration • Telemed • Nurse Call • Bed Management Cable 	
IT / IS Systems	\$10,000,000
<ul style="list-style-type: none"> • Network Equipment • Wireless Access • Network Appliances • Workstation Equipment (PCs, Printers, Arms, Cabinets) • Telephone Equipment • Cabling, Racks • Time Clocks, EMS Cables 	
Equipment Installation and Move in	\$400,000
Subtotal FF&E Costs	\$45,150,000

Owner Contingency	Cost
Owner Contingency	\$22,265,385
Subtotal	\$22,265,385

Garage #2 800 Cars	Cost
Soft Costs	\$1,280,000
Construction	\$16,000,000
Permits, Printing & Insurance	\$50,000
Testing & Inspection, Soils Testing	\$100,000
Construction Administration	\$40,000
Subtotal of All Costs	\$17,470,000
Contingency @ 5% of Subtotal	\$873,500
TOTAL COST	\$18,343,500

