

Facilities Consulting Engagement
Phase 1B – Part 2 Services
Detailed Site Study, Preliminary Budget and Schedule
Final Report
March 2018



Prepared by:



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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.

This final phase of the HBS Site Study provides additional analysis, conceptual renderings, preliminary budgets and schedules related to developing a healthcare campus on parcels StE-1 and StE-2 on the St. Elizabeths East site.



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

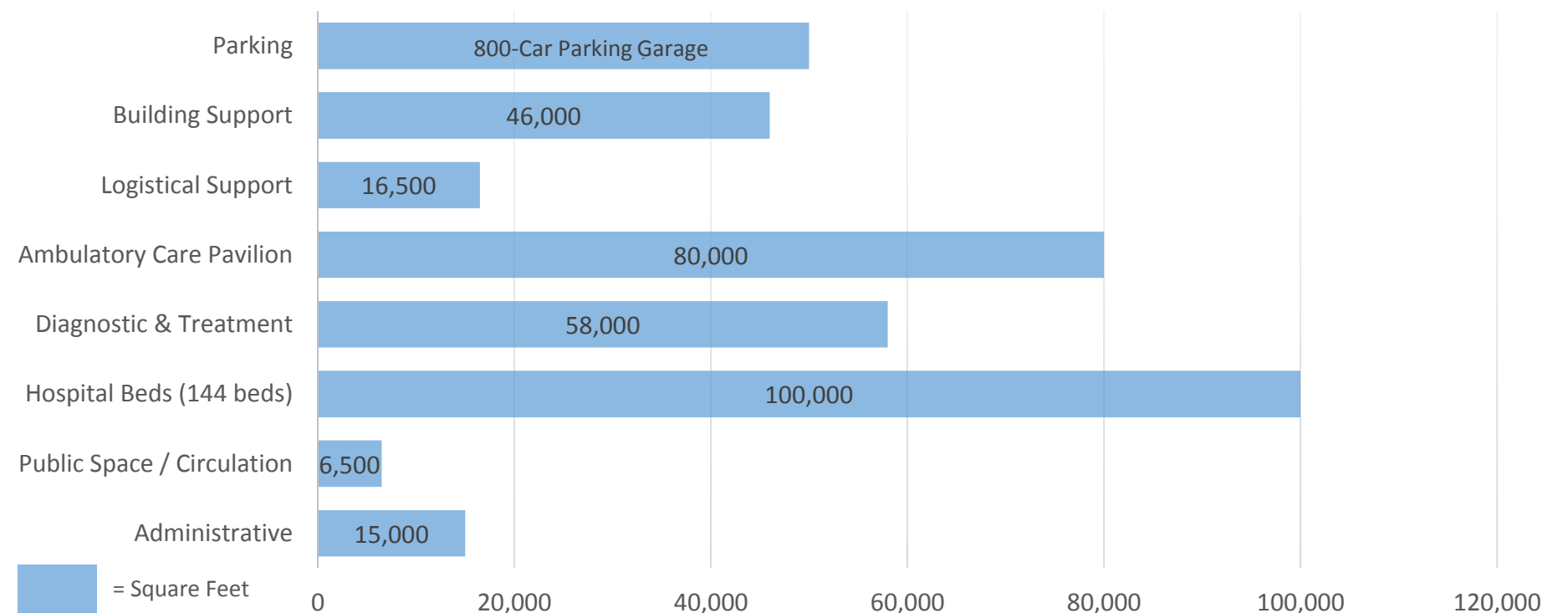
The “Strawman” Program requirements consisted of the following components:

- 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



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Section 2.0

Detailed Site Study

2.0 OVERVIEW

Following additional research regarding zoning and land use restrictions, combined with input and feedback from District Representatives, HBS developed the Preliminary Site Plan on the opposite page to assist with creating a vision for the new healthcare campus.

2.1 ENGINEERING STUDIES

As parcels StE-1 and StE-2 were previously proposed as a location for the FEMA headquarters, extensive engineering studies have been performed by the engineering firm CH2M. HBS utilized the data in these reports to develop the site plan option outlined in this report. To keep the report concise, we have not included the engineering reports in this document.

2.2 DESIGN STUDIES

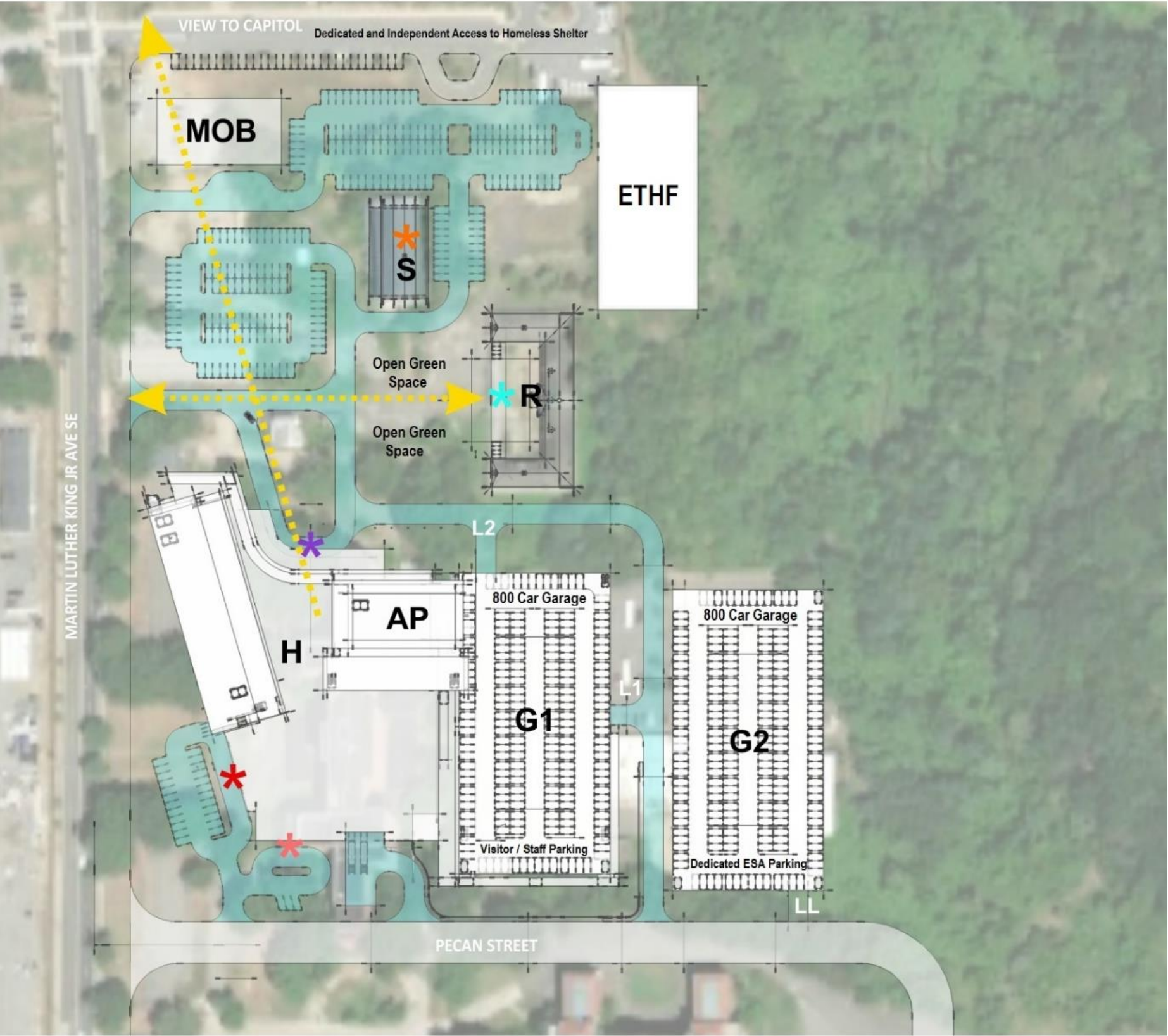
HBS investigated several site plan options during the development of the Detailed Site Analysis and the Site Plan Option presented in this report is the result of numerous meetings and discussions with District personnel. It is a recommendation only, one that meets the District's requirements at this point in time. Its inclusion in this report should not be construed as the final and only option for placing a healthcare campus on the St. Elizabeths East Campus.

2.2.1 KEY SITE PLAN FEATURES

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

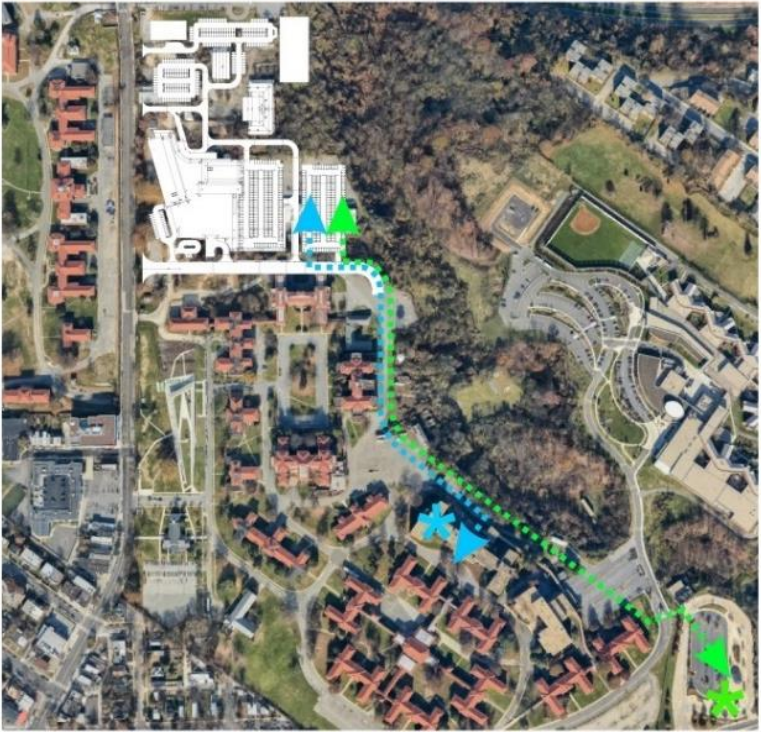
- The Hospital is sited to allow easy access and egress from MLK Boulevard and angled to provide views to the Capitol Building.
- The main entrances to both the Hospital and Ambulatory Pavilion features vehicular drop off zones for patients and visitors with easy access to the parking garage.
- Emergency 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 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.
- An new Emergency and Temporary Housing Facility will be constructed at the NE corner of Parcel StE-2 to allow for the construction of a dedicated 800-vehicle parking garage for the ESA (G2).
- 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.
- 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.
- Walking distance from ESA to Garage 2 is .3 miles.
- Walking distance from Metro to Garage 2 is .5 miles.

2.2.2 SITE PLAN



2.2.3 LEGEND

- H** HOSPITAL
- AP** AMBULATORY PAVILION
- R** RETAIL PAVILION
- ETHF** EMERGENCY & TEMPORARY HOUSING FACILITY
- G1** PARKING GARAGE - HOSPITAL/ AMBULATORY | 800 CARS
- G2** PARKING GARAGE - ARENA | 800 CARS
- S** STORAGE | EQUIPMENT OUT BUILDING
- MOB** MEDICAL OFFICE BUILDING OR RETAIL - 1 STORY
- MAIN ENTRY
- ED WALK-IN ENTRY
- AMBULANCE ENTRY
- HISTORIC BUILDING - HORSE BARN
- HISTORIC BUILDING - DRY BARN



- WALKING DISTANCE TO NEW ARENA FROM G2 = .3 MILES
 - WALKING DISTANCE TO METRO FROM G2 = .5 MILES
- N
NTS






SITE PLAN

2.3 PRELIMINARY PERSPECTIVES

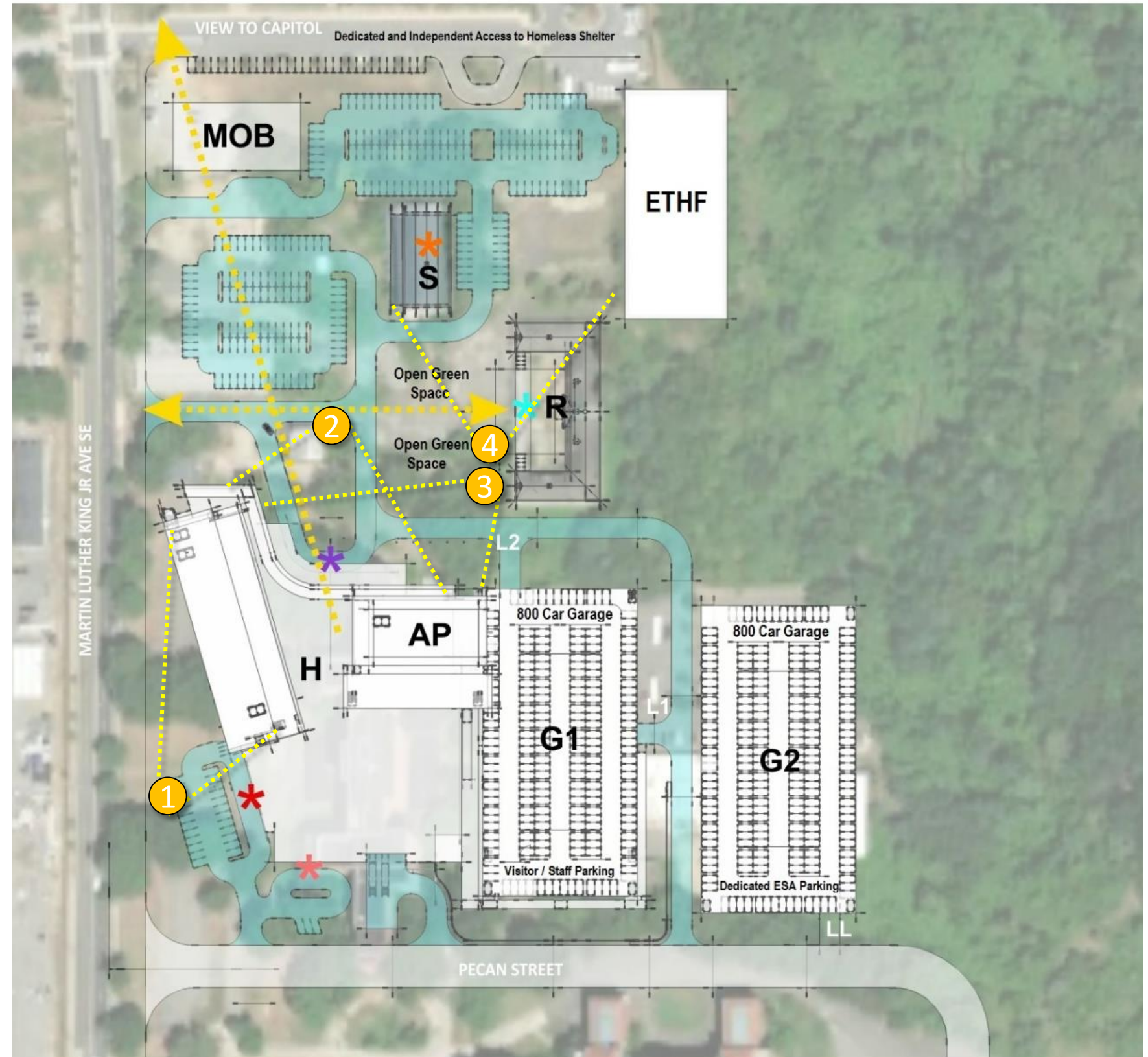
Recognizing the District is considering working with an independent operator for the new hospital, HBS prepared preliminary renderings for the new Hospital and Ambulatory Pavilion.

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 800 CARS
G2	PARKING GARAGE - ARENA 800 CARS
S	STORAGE EQUIPMENT OUT BUILDING
MOB	MEDICAL OFFICE BUILDING OR RETAIL - 1 STORY
	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

2.3.3 PERSPECTIVES OF REPURPOSED MAPLE QUAD

In addition to providing renderings of the New Hospital and Ambulatory Pavilion, the District requested renderings to show the relationship of the new Hospital Campus to the existing Maple Quad. These renderings illustrate potential redevelopment of the Maple Quad.



View of Maple Quad Looking East

2.3.3 PERSPECTIVES OF REPURPOSED MAPLE QUAD

In addition to providing renderings of the New Hospital and Ambulatory Pavilion, the District requested renderings to show the relationship of the new Hospital Campus to the existing Maple Quad. These renderings illustrate potential redevelopment of the Maple Quad.



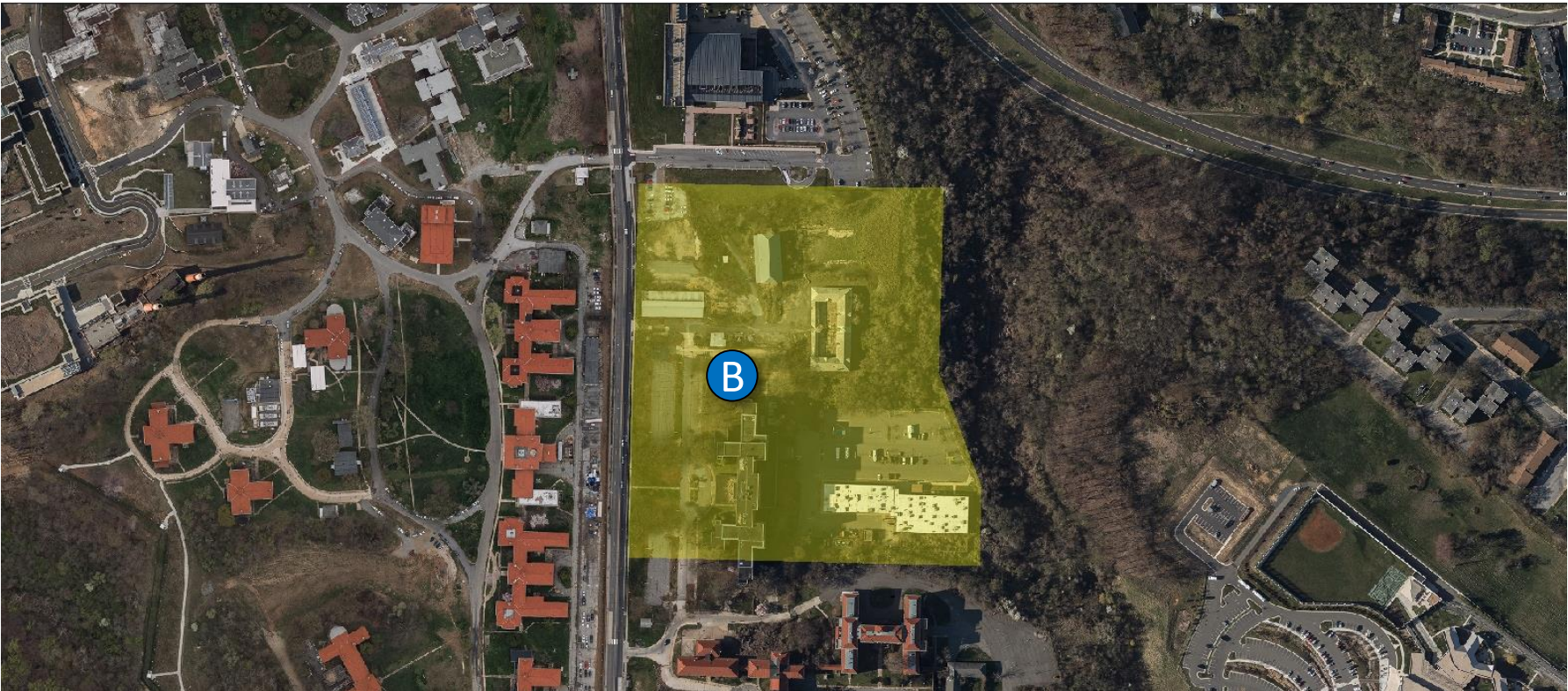
View of Maple Quad Looking North towards Proposed Hospital Campus.

2.4 DETAILED SITE INFORMATION

St. Elizabeths is in southeast Washington, DC and is comprised of the West and East Campuses bifurcated by Martin Luther King, Jr. Boulevard. Since 2010, hospital functions have been limited to a portion of the East Campus operated by the District of Columbia Department of Behavioral Health. The District of Columbia is currently developing a new Entertainment and Sports Arena (ESA) to serve as a facility for the city's professional basketball teams. Recently completed projects on the St. Elizabeths East Campus include the Gateway Center and the R.I.S.E. Demonstration Center. The ESA is under construction and scheduled for completion in the Fall of 2018. The West Campus is owned by the federal government and is being redeveloped for use as headquarters for the U.S. Department of Homeland Security and affiliated agencies.

2.4.1 NEIGHBORHOOD DESCRIPTION

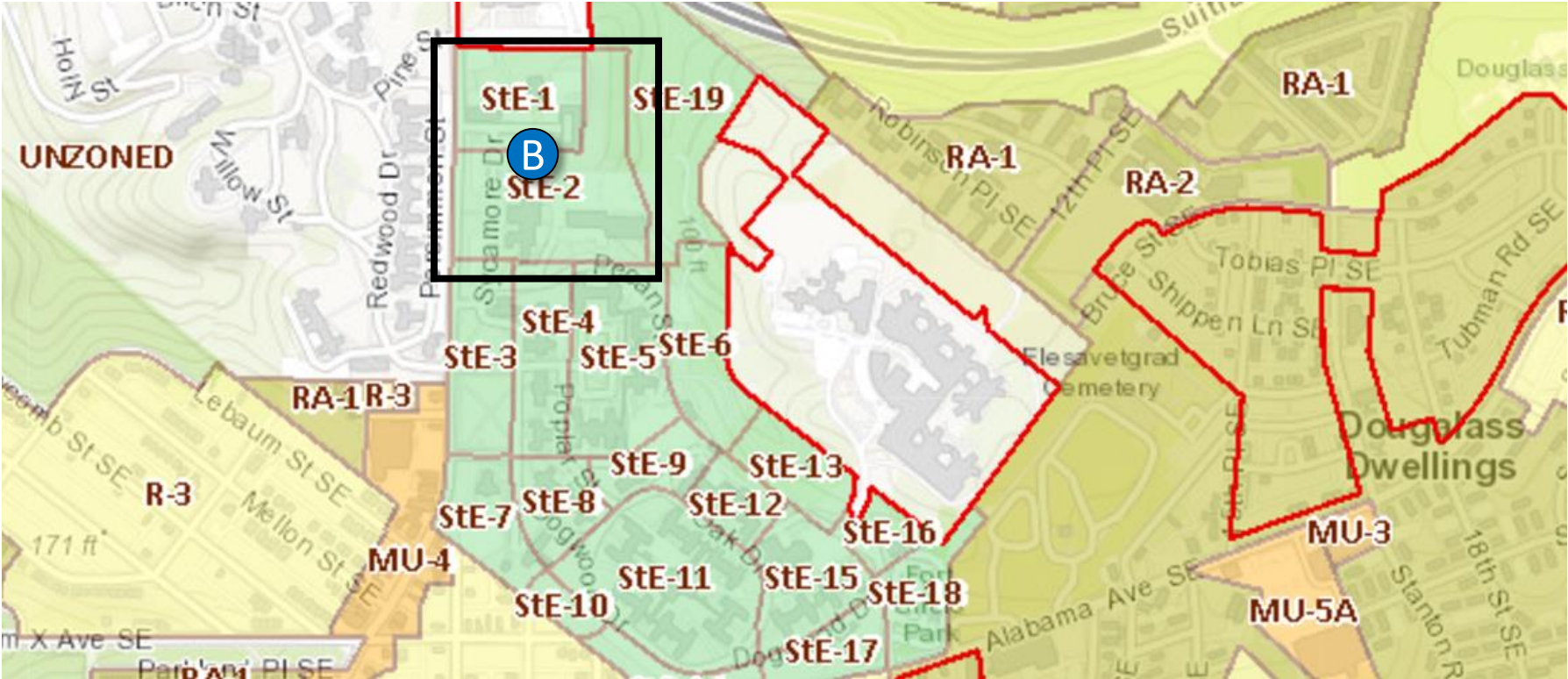
The St. Elizabeths East Campus is located in the heart of the District’s Ward 8. It occupies the northern edge of a triangular plateau that it shares with the neighborhood of Congress Heights. Barry Farm, a DC Housing Authority property, lies just across the northern property line of the campus, although a grade change of more than sixty feet creates a strong feeling of separation between the campus and the neighborhood. Most of the land surrounding the campus is low to moderate density, low-rise residential and commercial buildings supporting institutional and community uses such as schools, churches and parks.



The site is referred to as **B** throughout this section.

Saint Elizabeths Parcel 1	
Address	2700 Martin Luther. King, Jr. Boulevard, SE
Ward	8
Size	6.72 acres
Zoning	St. Elizabeths East Site 1 (St.E-1)

Use Permissions	Preferred Use Requirements
Subtitle K § 612	Subtitle K § 619



The site is referred to as **B** throughout this section.

St. Elizabeths Parcel 2	
Address	2700 Martin Luther King, Jr. Boulevard, SE
Ward	8
Size	12.36 acres
Zoning	St. Elizabeths East Site 2 (St.E-2)

Use Permissions	Preferred Use Requirements
Subtitle K § 612	Subtitle K § 619

2.4.2 PARCEL / LOT IDENTIFICATION

Parcel StE-1 is identified as Lot 0831 on Square 5868 in the District of Columbia Land records. Referred to as the Urban Farm Parcel, it is located at the far north end of the St. Elizabeths East Campus. The parcel contains the oldest existing buildings on the campus. The site’s two barns and two staff cottages are the last reminders of both the agricultural roots of St. Elizabeths East and the farm’s importance in the history of the Hospital.

Parcel StE-2 is identified as Lot 0832 on Square 5868 in the District of Columbia Land records. It is located to the north of Pecan Street. The parcel is a backwards L-shaped area wrapping two sides of the Farm Complex. The property lies north of the main part of St. Elizabeths East and extends along MLK Avenue at the western edge of the site. The use of Parcel 2 had been designated for Federal Government use as a potential site for the FEMA Headquarters.

2.4.3 FLOOD ZONE INVESTIGATION

Both parcels are identified on the FEMA Flood insurance rate map (FEMA-FIRM) number 1100010076C, dated September 16, 2016. Based on this source, the property is within Zone X outside of the 100 year flood zone.

2.4.4 ZONING PARAMETERS

The Saint Elizabeths East Campus (StE) zones (StE-1 through StE-19) are unique location zones created to implement the public policy goal and objectives of the Comprehensive Plan, St. Elizabeths Redevelopment Framework Plan, as approved by the Council of the District of Columbia on December 16, 2008, and the Saint Elizabeths East Master Plan and Design Guidelines, June 4, 2012.

Each parcel within St. Elizabeths East is governed by an independent set of zoning requirements intended to reflect the density, bulk, and use intentions described by the Master Plan. Existing zoning provisions also carefully address parking considerations, limiting the total number of on-campus parking spaces, discouraging surface parking, and prescribing setbacks and “liner” program in portions of the campus where architectural and public realm treatment is especially sensitive.

The purposes of the StE zones are to:

- Provide for the development of the site with a mix of uses, achieved through the adaptive reuse of existing buildings as well as new construction;
- Provide for a broad mix of uses, including residential, commercial, hospitality, educational, and civic uses consistent with the master plan, with a target of approximately four million two hundred thousand square feet (4,200,000 sq. ft.) of development, exclusive of the StE-2, StE-18, and StE-19 zones and specified above-grade parking;
- Improve community connectivity and access to and through the campus;
- Enhance the unique and historic identity of the campus;
- Reinvigorate the campus as an important neighborhood center;
- Preserve and adaptively reuse the historic resources;
- Embody the District’s design and sustainability goals;

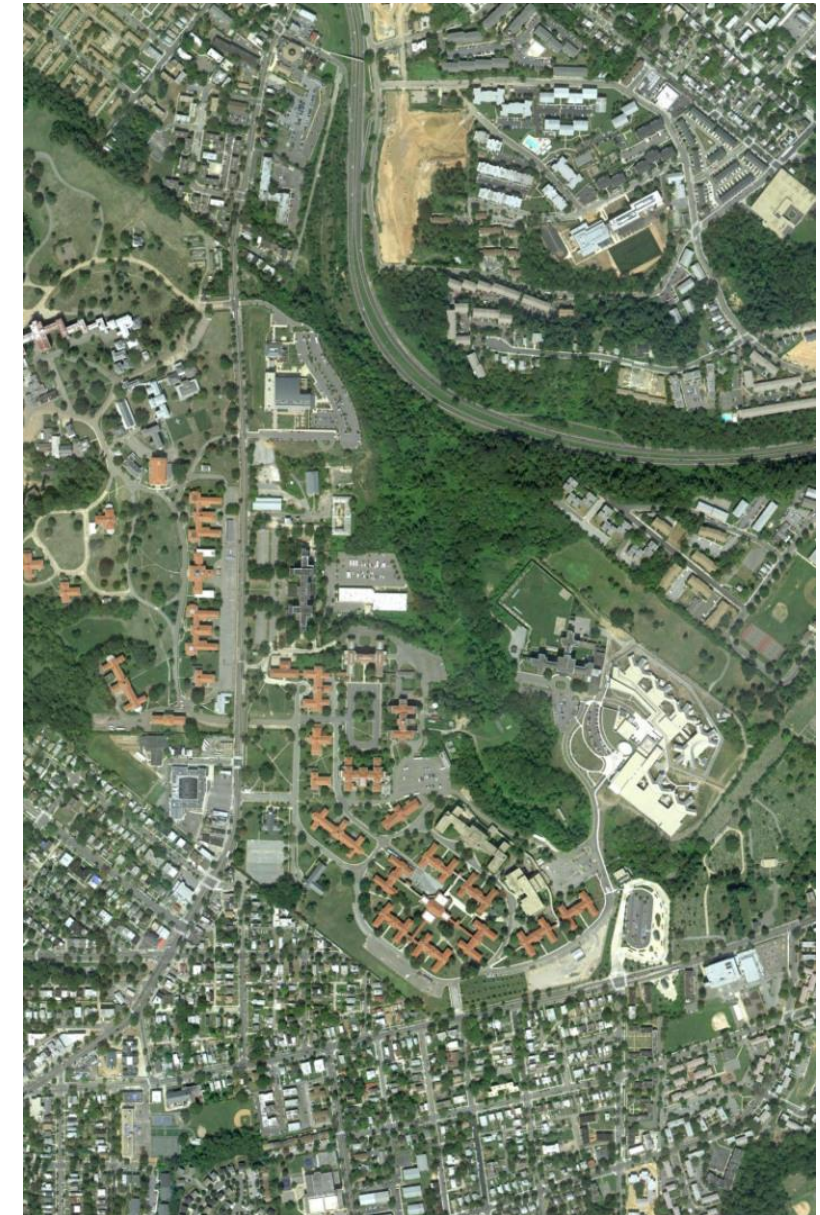
- Create a safe public realm and enhanced pedestrian experience;
- Enhance multi-modal transportation networks;
- Support wider economic development initiatives; and
- Ensure a parking supply that meets the needs of the St. Elizabeths site while minimizing impacts on surrounding neighborhoods and incurring acceptable impacts on the surrounding road network.

The land use and design principles are as follows:

- Create a safe environment by providing for a mix of uses and open spaces that are capable of being programmed to ensure vitality and social activity;
- Create a desirable development opportunity by providing for flexibility in uses and appropriate building heights and densities;
- Provide street-activating uses such as retail on the ground floor of buildings along designated public streets;
- Recognize the unique and historic characteristics of the site and provide for the appropriate reuse of the historic buildings and new development that will respect the site’s historic nature;
- Design and site new development sensitively to preserve existing gateways, vistas, and campus landmarks;
- Create focal points to help establish a unique sense of place and orientation;
- Provide for significant open space, including community parks, plazas, and natural open space on the site; and
- Promote the use of best practice environmental and stormwater management design.

Use Permissions are summarized in Subtitle K § 612 of the D.C. Municipal Regulations (DCMR) and Preferred use Requirements may be found in Subtitle K § 619 of the DCMR.

A Certificate of Need would be required for any new medical use as a hospital.



2.4.5 INFRASTRUCTURE ASSESSMENT

As part of the investigation for Phase 1B Part 1 Services, representatives from HBS met with Ed Fisher, St Elizabeths East Executive Director, and confirmed that there is no working infrastructure on parcels 1, 2 or the Maple Quad and that onsite infrastructure costs would have to be included in the hospital budget or expanding the DMPE St. Elizabeths Infrastructure Capital project.

This information below was obtained from the St. Elizabeths East website. As a result of a comprehensive planning effort, the District secured over \$100 million in capital budget dollars for St. Elizabeths East through 2021. The District has allocated the large majority of these funds to designing and building the public infrastructure improvements needed to support all planned future development at St. Elizabeths East, including roadways, water, gas, electric, telecommunications, streetscapes and street lighting, in addition to the demolition of certain non-contributing structures at the campus.

The District is working to complete the first of two stages of infrastructure construction to occur within St. Elizabeths East.

The Saint Elizabeths East Campus Stage One Infrastructure and Utility Improvement project will:

- Provide connectivity within the East Campus and between the campus and adjacent neighborhoods,
- Upgrade and replace existing utility infrastructure to support the planned development, and
- Provide multi-modal transportation options (public transit, bicycle and pedestrian) to support the redevelopment of the East Campus.

Stage One of the improvements will be sufficient to support the initial phases of development on the campus. As part of the Stage One infrastructure improvements, the District will be undertaking the demolition of certain non-contributing buildings on the campus.

This phase is scheduled for completion at the end of 2018.

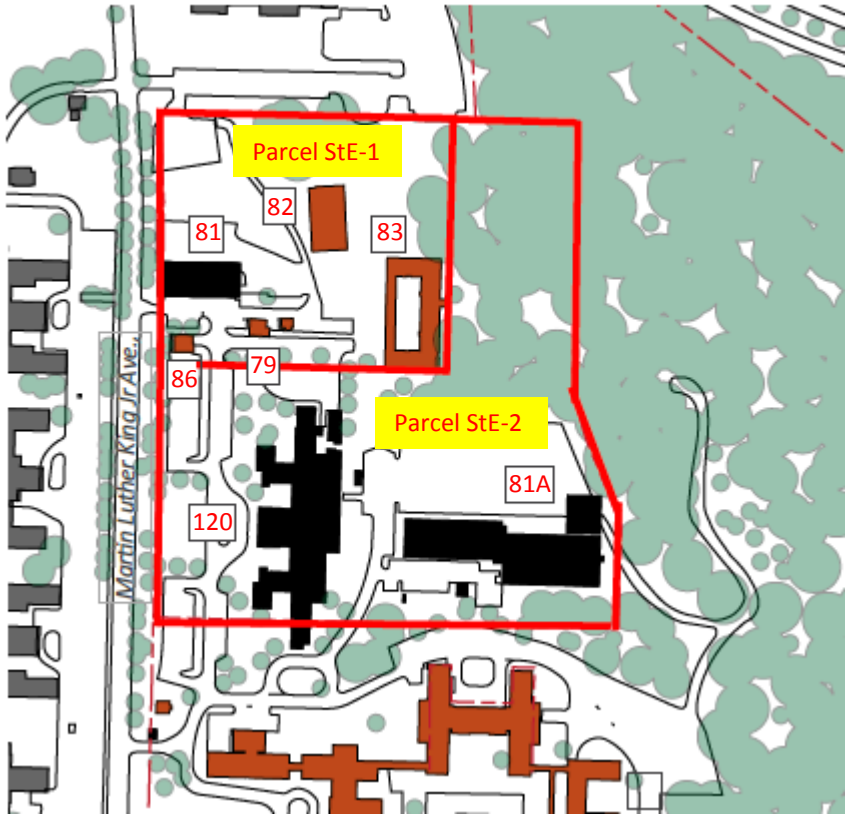


2.4.6 CURRENT USE / DISPOSITION

Parcel StE-1, the Farm Complex, is located at the far north end of the East Campus. The United Communications Building is located directly to the north of the parcel.

Parcel StE-1 contains the oldest existing buildings on the St. Elizabeths Campus. Although these residential and farm buildings exhibit a range of architectural vocabularies, they form a cohesive unit in their distinction from the larger masonry hospital buildings on the East Campus. The 2012 Master Plan completed by Ayers Saint Gross recommended that development in this area should respect the agricultural history and character of the Farm Complex and noted that restoring the historic agricultural use of the sector is a strong desire of the community.

Today, only two of the original East Campus agricultural buildings remain in their original locations: the Dry Barn and the Horse Barn (Buildings 82 and 83, respectively). Two of the original staff cottages (Buildings 79 and 86) were relocated to this parcel in 2005 and are the last remaining residential buildings associated with farming on the East Campus.



Parcel StE-2 is directly south of Parcel StE-1 and north of Pecan Street and comprises an L-shaped area wrapping two sides of the Farm Complex. The property lies north of the main part of the East Campus and extends along MLK Avenue at the western edge of the site. It is relatively flat and offers potentially pleasing views to the east. However the east side slopes downward toward the parking lot of the existing Emergency and Temporary Housing Facility (Building 81A).

The 7-story Dorthea Dix Pavilion, constructed from 1953-1959, occupies the majority of Parcel StE-2. Located on the east side of Sycamore Street, the building is located northeast of Maple Quadrangle and faces west toward Martin Luther King, Jr. Boulevard and the Saint Elizabeths West Campus. The building is in a severe state of disrepair and funds have been budgeted for its demolition in the Fiscal 2017-2018 budget.

Parcel StE-2 had been identified as a potential site for the new FEMA headquarters and initial feasibility, programming and planning work prepared. A 2014 Urban Hospital Feasibility Study investigated Parcel 2 to determine if a hospital could be co-located on the site with the FEMA headquarters. The study concluded that the hospital could not be co-located with a Federal use on Parcel StE-2.



View into Farm Complex from MLK Boulevard

Building #	Building Name
81	Garage / Motor Pool
82	Dry Barn
83	Horse Barn
86	Staff Residence Number 9
79	Staff Residence Number 8
81A	Emergency/Temporary Housing Facility
120	Dorthea Dix Pavilion



View of Dorthea Dix Pavilion from MLK Boulevard



East Elevation of Building 81 – Motor Pool / Garage



Northeast Corner of Building 81 – Motor Pool / Garage



Southeastern Entrance of Building 81 – Motor Pool / Garage



Southwest View of Building 82 – Dry Barn



Southern Entry Bridge Building 82 – Dry Barn



First Floor Entry Building 82 – Dry Barn



West Elevation of Building 83 – Horse Barn



Side Wing Looking South of Building 83 – Horse Barn



Front Gabled Entry of Building 83 – Horse Barn

2.4.7 BOUNDARIES AND DIMENSIONS

The site (StE-1 and StE-2) is bounded by the following roads and buildings:

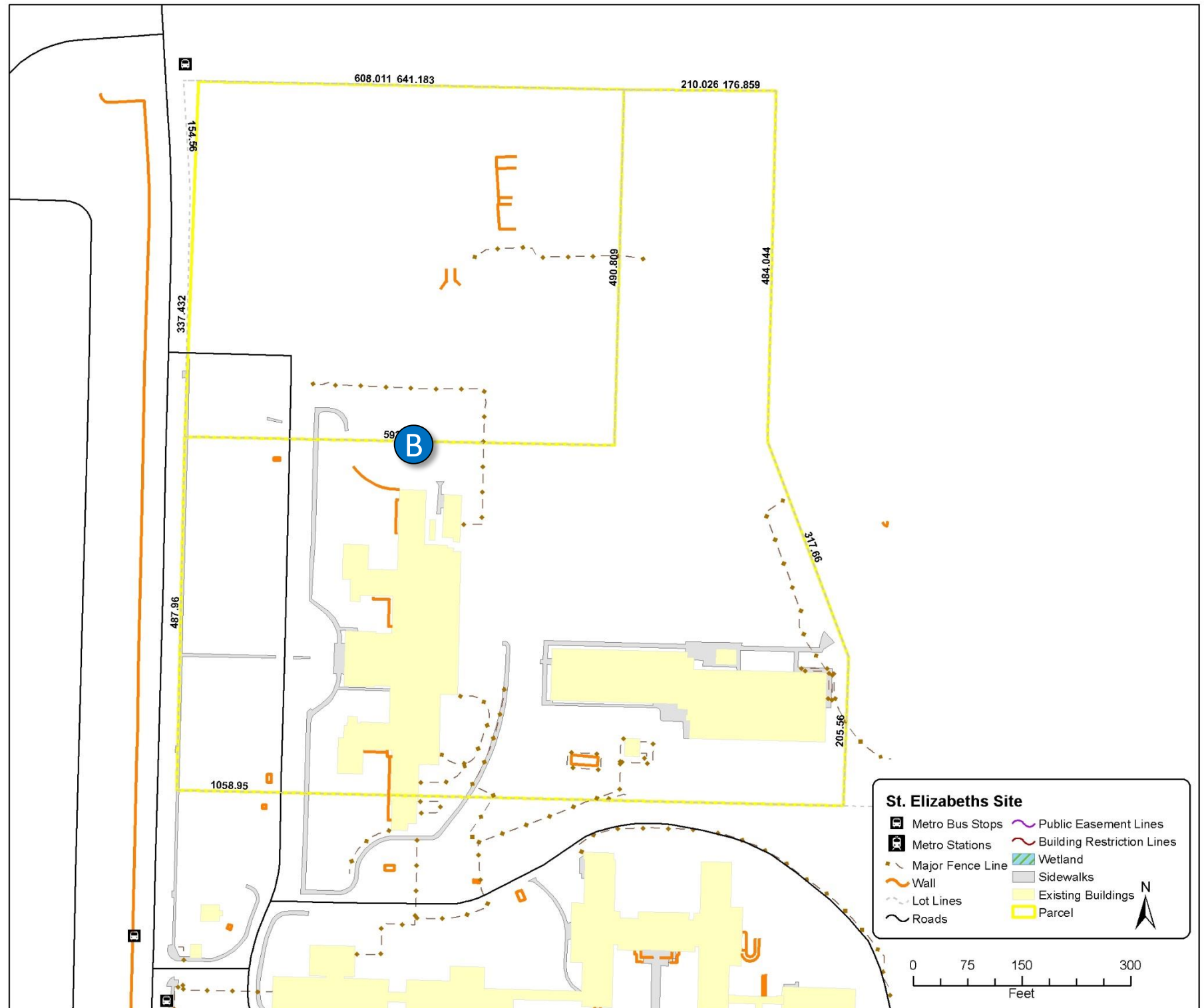
- United Communications Center to the North
- Martin Luther King, Jr. Boulevard SE to the West
- Pecan Street SE to the South

The total acreage of both parcels is 19.08.



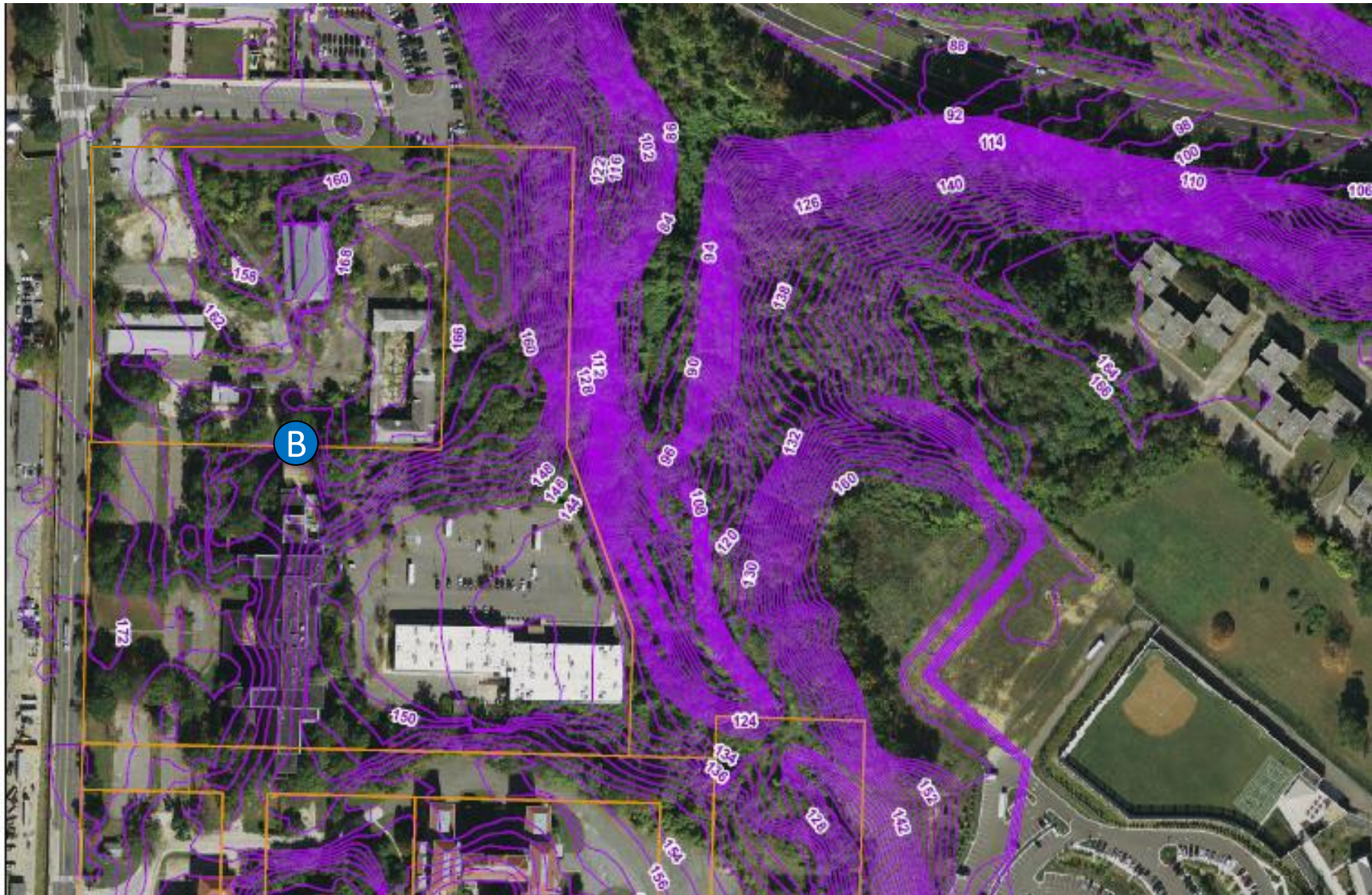
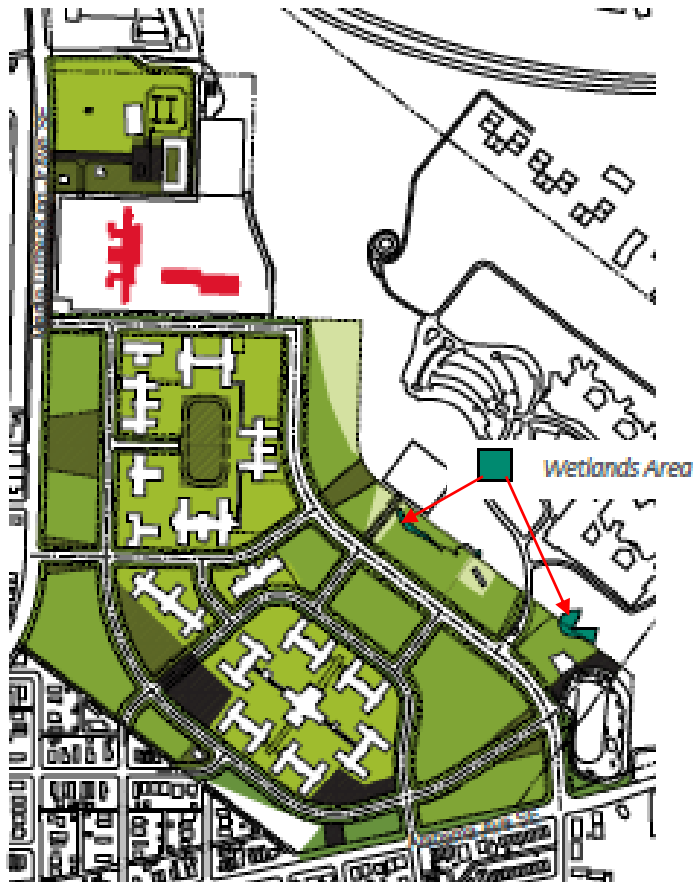
2.4.8 EASEMENTS

Undetermined easements must exist under roadways and/or utility lines. These would have to be removed and redone for a new hospital.



2.4.9 WETLANDS

As part of the 2012 Master Plan report prepared by Ayers Saint Gross, that team conducted a review of existing site conditions for the Transportation Environmental Assessment, that included a detailed survey (including documentation research and field investigations) of the East Campus and identified two water bodies that may be considered wetlands. See map below. The U.S. Geological Survey (USGS) quadrangle map, National Wetland Inventory, District of Columbia Wetland Conservation Plan (District of Columbia, 1997) and online District geographic information system files showed no documented water bodies or wetlands within Parcels StE-1 or StE-2. A detailed ecological survey was also conducted for the site that identified two potential wetlands in the undeveloped eastern section of the project area. More detailed information on the wetlands is available in the Transportation EA wetland delineation report which HBS will use to inform additional planning and coordination efforts related to this issue should this site be selected for further investigation under Phase 1B Part 2 Services.



2.4.10 TOPOGRAPHY

The site is relatively flat; however the site falls off to the east and drops to a ravine which is located in Parcel StE-19. Running through the edge of Parcel StE-19 is the WMATA Metro underground. It may be possible to place the new hospital to take advantage of the topography to provide views to nature and include future walking paths.

It should be noted that the Transportation Environmental Assessment has identified the ravine as a potentially sensitive area for development. Therefore, development in the ravine should be carefully placed, and effort should be made to restore the native planting once development is complete.

2.4.11 ADJACENT PROPERTY / STRUCTURES

Most of the property surrounding the two parcels under consideration are owned by either the District of Columbia or the federal government.

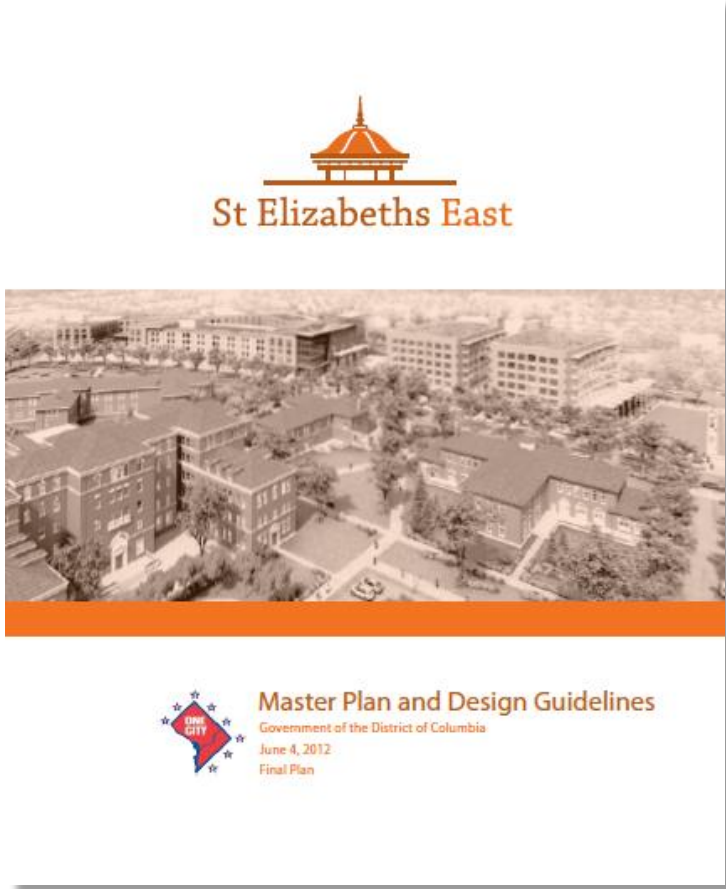
Directly north of the site is the Unified Communications Center for the District of Columbia. Directly across Martin Luther King, Jr. Boulevard is the St. Elizabeths West Campus which is surrounded by 12 foot brick wall.

A District of Columbia Emergency and Temporary Housing Facility, "801 East", is directly behind the existing Dorthea Dix Pavilion. A newly constructed water tower is to the east of the Pavilion. There are historic properties on Parcel StE-1. Running through the edge of Parcel StE-19 is the WMATA Metro underground.



2.4.12 HISTORIC STRUCTURES

The following material has been obtained from the St. Elizabeths East Master Plan Design Guidelines prepared by Ayers Saint Gross dated June 4, 2012.



There are several buildings on Parcel StE-1 that are designated as part of the Saint Elizabeths Hospital National Historic Landmark and are protected under federal and local laws.

The Master Plan states that the preservation and sensitive reuse of historic resources on the St. Elizabeths East Campus is an essential part of the Master Plan and that the preservation of the historic East Campus and its many significant resources is paramount to the success of the East Campus redevelopment. The East Campus provides a unique opportunity to open a once closed historic property to the community and to realize its potential as a public asset.



The historic buildings, structures and landscapes that characterize the East Campus represent a significant part of our national and local history, and the implementation of the East Campus Master Plan will ensure that this treasure is preserved, revitalized and made accessible.

As part of the Saint Elizabeths Hospital National Historic Landmark (NHL) and local Historic District, the East Campus is protected under federal and local historic preservation laws and regulations, as well as the historic covenant contained in the Deed.

The East Campus of Saint Elizabeths Hospital consists of four major historic building groupings:

- Farm Complex
- 1902 Buildings
- Maple Quadrangle
- Community Technology (CT) Village.

Please refer to the map on the opposite page.

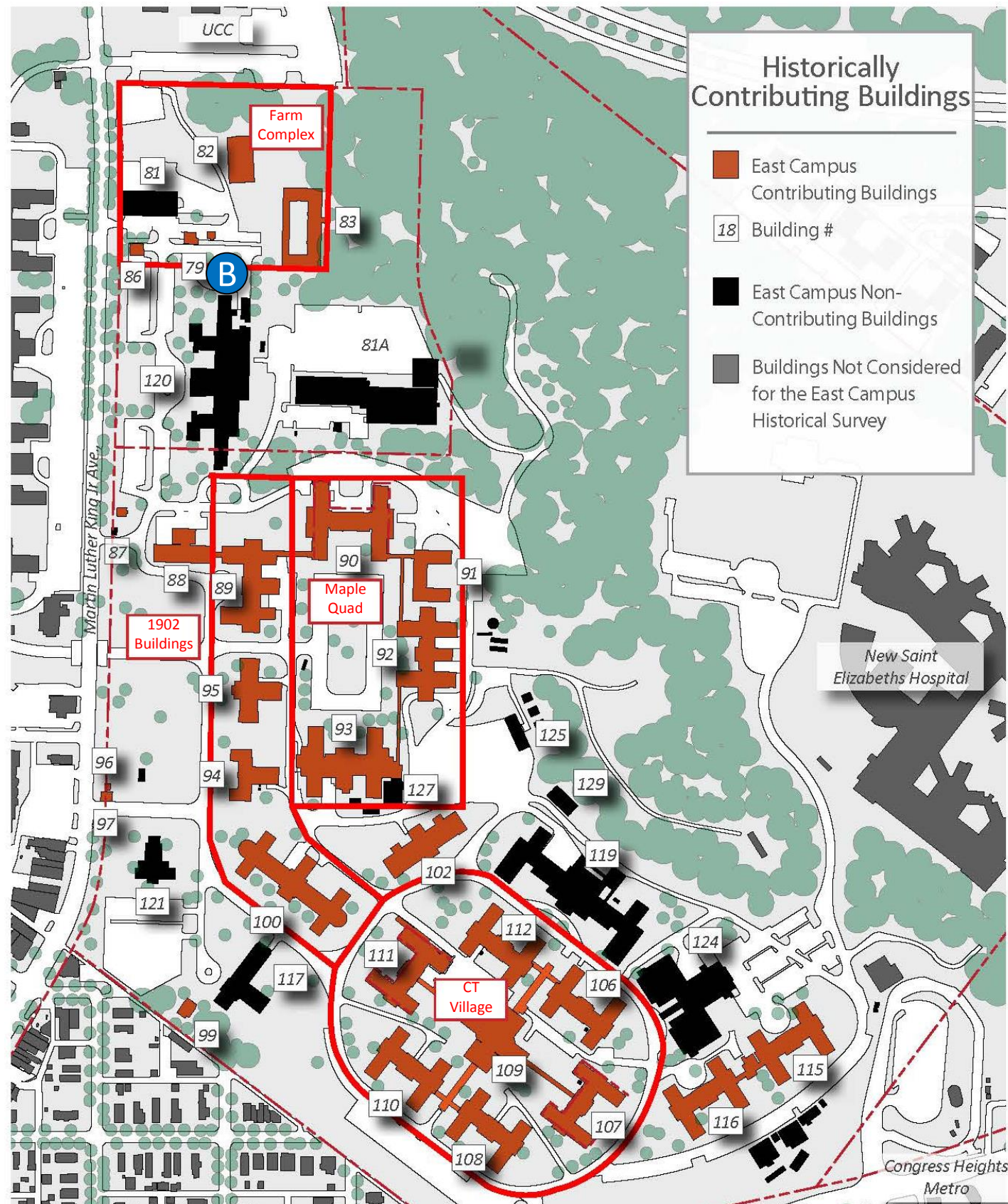
One of the Master Plan’s objectives is to preserve these significant building groupings and maintain the legibility of historic development on the East Campus.

As a result, the Master Plan includes the retention and adaptive use of 16 existing historic buildings along with historic structures and landscape features. The Master Plan also seeks to maintain and celebrate the unique character of the historic buildings and provide the opportunity for compatible new development that continues the evolution of the campus into the 21st century.

The Master Plan outlined design principles to specifically address the treatment of the historic buildings and structures contributing to the Saint Elizabeths Hospital NHL.

These guidelines will need to be addressed and may require modification should this site be selected for the new hospital.

HBS is confident that a site plan can be developed that respects these historic buildings.



Parcel 1 Design Guidelines

The text below is reproduced from the St. Elizabeths East Master Plan Design Guidelines prepared by Ayers Saint Gross dated June 4, 2012.

Addition and Modification:

Today, only two of the original East Campus agricultural buildings remain in their original locations: the Dry Barn and the Horse Barn (Buildings 82 and 83, respectively). Two of the original staff cottages (Buildings 79 and 86) were relocated to this parcel in 2005 and are the last remaining residential buildings associated with farming on the East Campus. The Scale, a structure used as part of the agricultural operations, is also extant within the Farm Complex.

- A.1 Character-defining features of the contributing buildings should be preserved as part of any rehabilitation or modification scope.
- A.2 Non-contributing materials and features (asbestos shingles, vinyl siding, temporary railings, etc.) should be removed from the cottages where possible and replaced with materials and features appropriate to the period and type of construction of the cottages. Replacement of missing features should be substantiated by documentary, physical, or pictorial evidence.
- A.3 The farm scale should be retained in its original location and preserved or restored. Because of the character of this resource, no additions or major alterations should be undertaken.
- A.4 Additions should be limited to secondary elevations and not be visible from Martin Luther King, Jr. Boulevard.
- A.5 Additions should be designed to be compatible with the material and character of the historic buildings in the Farm Complex.
- A.6 Additions to the barns outside their existing footprints should be avoided. Necessary additions should be confined to rear elevations only, and designed to minimize impacts on the barns' agricultural character.

- A.7 The integrity of the two remaining staff cottages has been diminished by their relocation and previous alterations.
- A.8 Additions should be compatible in size and massing, and not exceed the cornice or roof line of the associated building.

New Architecture

- N.1 The development of Parcel 1 does not anticipate the construction of major buildings, but minor structures may be needed in support of agriculture and/or community uses. Agricultural improvements to the land should enhance rather than detract from the historic structures.
- N.2 Modest surface parking adjacent to buildings 82 and 83 would be permitted, so long as it is designed to minimize impervious surfaces and is screened with landscape buffers.

Landscape

No distinctive landscape characteristics remain. The road leading from MLK to the barns retains its original alignment but has no material integrity. Open space around the buildings has been largely paved or developed, and the relocated cottages are not within their original setting.

- L.1 It is anticipated the new paving is needed for new circulation and parking areas. Parking should be placed behind buildings so it is not seen from MLK Ave to help restore the agricultural setting of the Farm Complex.
- L.2 The existing alignment of Magnolia Street should be preserved. If its width needs to be adjusted, that should be done carefully in order to retain the concrete piers at the entry gate. Widening should be done in coordination with the General Services Administration and Department of Homeland Security East Campus North Parcel Master Plan.
- L.3 The remnants of cobblestone at the entry to the Horse Barn should be preserved, as should the ramps to the Dry Barn. Any other cobblestone remnants uncovered should also be preserved.

HISTORIC RESOURCES: PARCEL 1



Figure 3.27: Character Defining Features of Parcel 1

Parcel 1 Contributing Buildings

- | | |
|--|---------------------------------------|
| » Staff Residence No. 8, Building 79, 1888 | » Exposed rafter ends |
| » Dry Barn, Building 82, 1884 | » Metal roof shingles |
| » Horse Barn, Building 83, 1902 | » Bluestone piers and concrete bridge |
| » Staff Residence No. 9, Building 86, 1888 | » Board and batten siding |
| » Secondary Historic Built Resources | » Brick foundation |
| » Farm Scale, pre-1921 | » Red brick walls |

Parcel 1 Character-Defining Features

- | | |
|-----------------------------------|---|
| » Residential scale and character | » Complex hipped roof form |
| » Frame construction | » Cupola |
| » Gabled roof forms | » Dormer windows |
| » Multi-light wood sash windows | » Courtyard |
| » Porches | » Stone and brick detailing and ornamentation |
| » Jerkinhead roof form | » Remnants of cobblestone entry |

This table identifies the historic structures on Parcel StE-1 and their character-defining characteristics.

2.4.13 HAZARDOUS MATERIALS

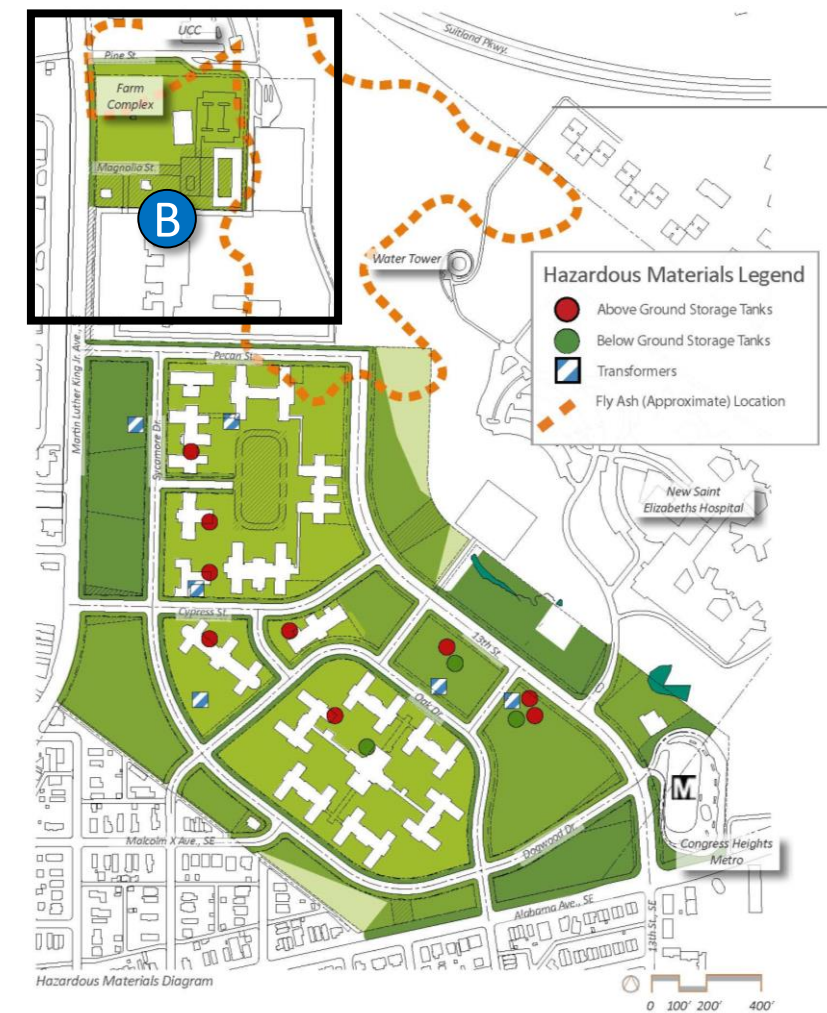
As part of Phase 1B Part 1 Services the HBS team reviewed documentation available in the public domain. Documents reviewed included the St. Elizabeths East Master Plan Design Guidelines prepared by Ayers Saint Gross dated June 4, 2012. The information below is reproduced from that report. Once the final site is selected, HBS will conduct a full geotechnical assessment which will include the identification of hazardous materials on site.

As with many sites developed in the early 1900s, the East Campus features hazardous materials within existing buildings and facilities, and buried in selected locations on the campus. Detailed review and research of the historic documentation, previous site assessments, and regulatory records show that such materials within existing buildings, site structures, and landscape features include:

- **Asbestos:** ACM vinyl tiles and pipe insulation are present in some buildings and utilities.
- **PCB:** Power transformers were observed at Buildings 88, 90, 92, 93, 94, 117, 119, and 124.
- **Power transformers** within the project area are owned by the US General Services Administration or the District of Columbia. The power transformers on the East Campus are non-PCB containing transformers.
- **Lead-Based Paint (LBP):** LBP is suspected in the interior wall and ceiling paint, and in the wood trim of historic structures. Based on the age of the buildings on the East Campus (those built prior to 1977), it is highly likely LBP may have been used to paint the exterior of the buildings.
- **Underground Storage Tanks (USTs):** Based on a 1995 RCRA Compliance Evaluation Inspection conducted by EPA on the Saint Elizabeths Campus, there were 10 USTs.
- **Radon:** The rocks and soils found in the vicinity of the East Campus were mapped as having low radon potential (average readings of 0 to 4.0 picocuries per liter (pCi/L)).

- **Fly Ash and Fill Materials:** Approximately 30 acres along the northern most portion of the East Campus, on Parcels StE-1 and StE-2, between Suitland Parkway and Building 81, were formerly operated by the District of Columbia Department of Public Works as a landfill under Permit 1-83 (FHWA, 2008). The landfill was closed between 1983 and 1989, prior to regulation under the RCRA. The District DOH determined that the surface soil levels of polychlorinated dioxins and furans present at the site should not pose a public health threat to employees, patients, residents, or landfill workers (FHWA, 2008).

Future development or infrastructure construction on campus will lead to additional environmental review and testing for these issues in order to develop a safe removal and abatement plan. For example, core sampling is recommended in landfill areas of future construction that would be at depths greater than 1 foot (FHWA, 2008).



2.4.14 TRAVEL TIME TO PUBLIC TRANSPORTATION

In the Final Draft of the District of Columbia's Health System Plan it was stated that "lack of transportation" was a theme from the assessment's key informant interviews and community forums. Many forum participants and interviewees identified transportation issues for those living in Wards 4, 5, 7, and 8; the primary issue being the expense of public transportation, followed by the system's inefficiency. A number of forum participants reported using the DC public bus system as a low-cost alternative to the Metro, but described the system as time-consuming, unreliable, and inflexible.

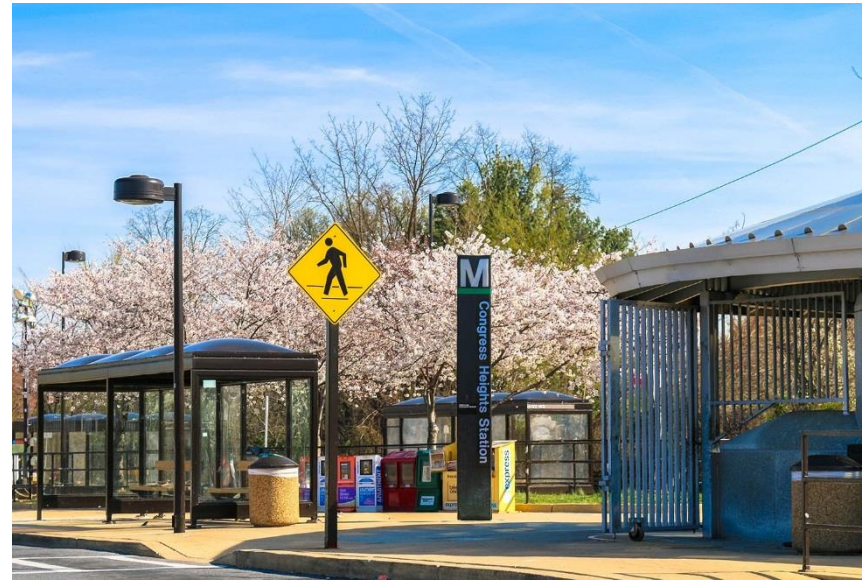
Just under three miles from the U.S. Capitol, the St. Elizabeths East Campus is a short drive from Ronald Reagan National Airport, and easily accessible from the region's newly renovated Interstate highway system, including I-295, I-395, and the Capital Beltway.

St. Elizabeths East Campus site is adjacent to the Congress Heights Metro Station. In addition four bus stops are within a 5-minute walk of the site.

The site has frontage and visibility along Martin Luther King, Jr. Boulevard and Alabama Avenue which are a main commuter roadway within the neighborhood.

With the construction of the new Sports and Entertainment Center and to better serve the needs of the redeveloped St. Elizabeths East Campus and its community, the Office of the Deputy Mayor for Planning and Economic Development (DMPED), with the assistance of the District of Columbia Department of Transportation (DDOT) is planning a slate of infrastructure improvements.

HBS has had preliminary discussions with WMATA regarding shuttle bus service to facilitate access to different locations within St. Elizabeths East campus. Based upon our previous experience with WMATA, HBS strongly believes WMATA will cooperate to bring a dedicated shuttle bus serving the hospital and the ambulatory campus.



Metro Access:

Congress Heights
Distance to Metro: 0.52 miles
Green Line

Anacostia (1.16 miles)
Distance to Metro:
Green Line

Bus Routes:

MLK @ Lebaun Street: A2 A4 A6 A7 A8 W2 W3
MLK @ Milwaukee Place: A2 A4 A6 A7 A8 W2 W3
MLK @ St. Elizabeths East Gate 2: A2 A4 A6 A7 A8 W2 W3
Alabama Ave @ 11th Place: W1 W2 W3 W4
Alabama Ave @ 12th Street: W1 W2 W3 W4
Alabama Ave @ 13th Street: W1 W4 92

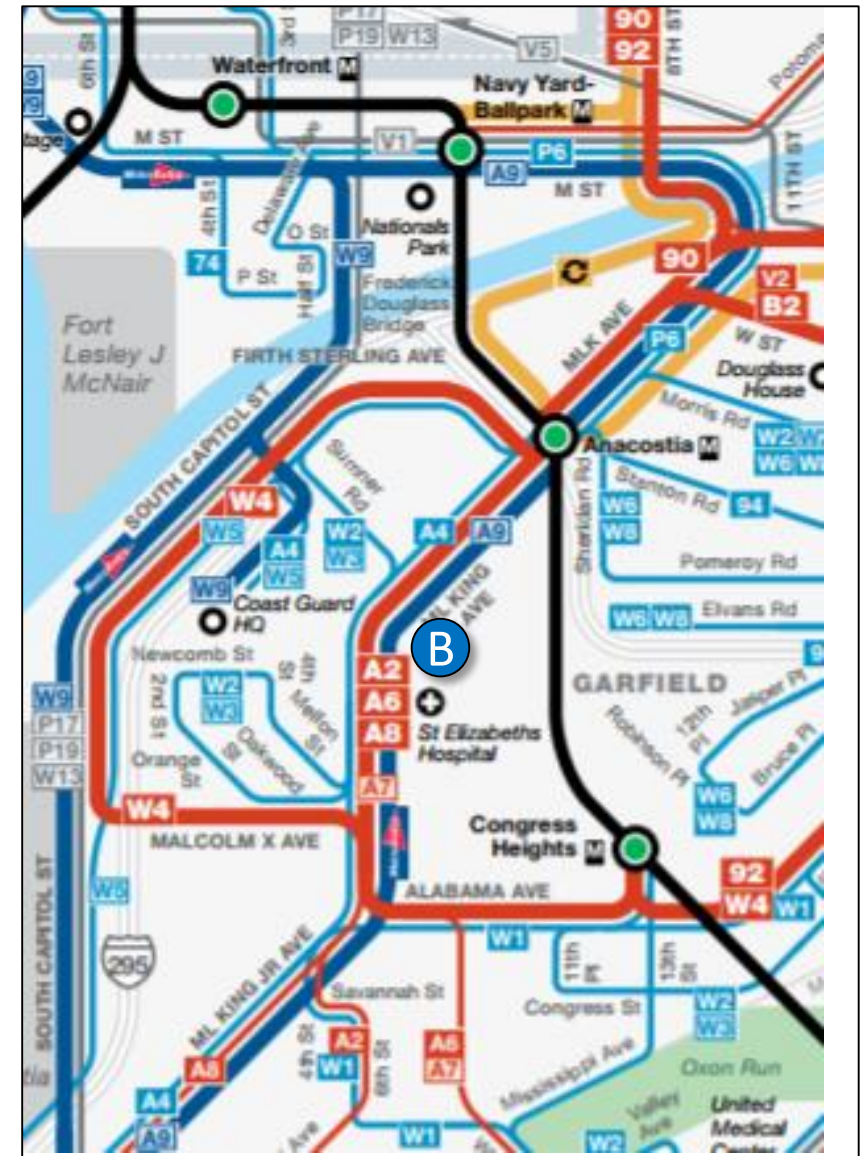
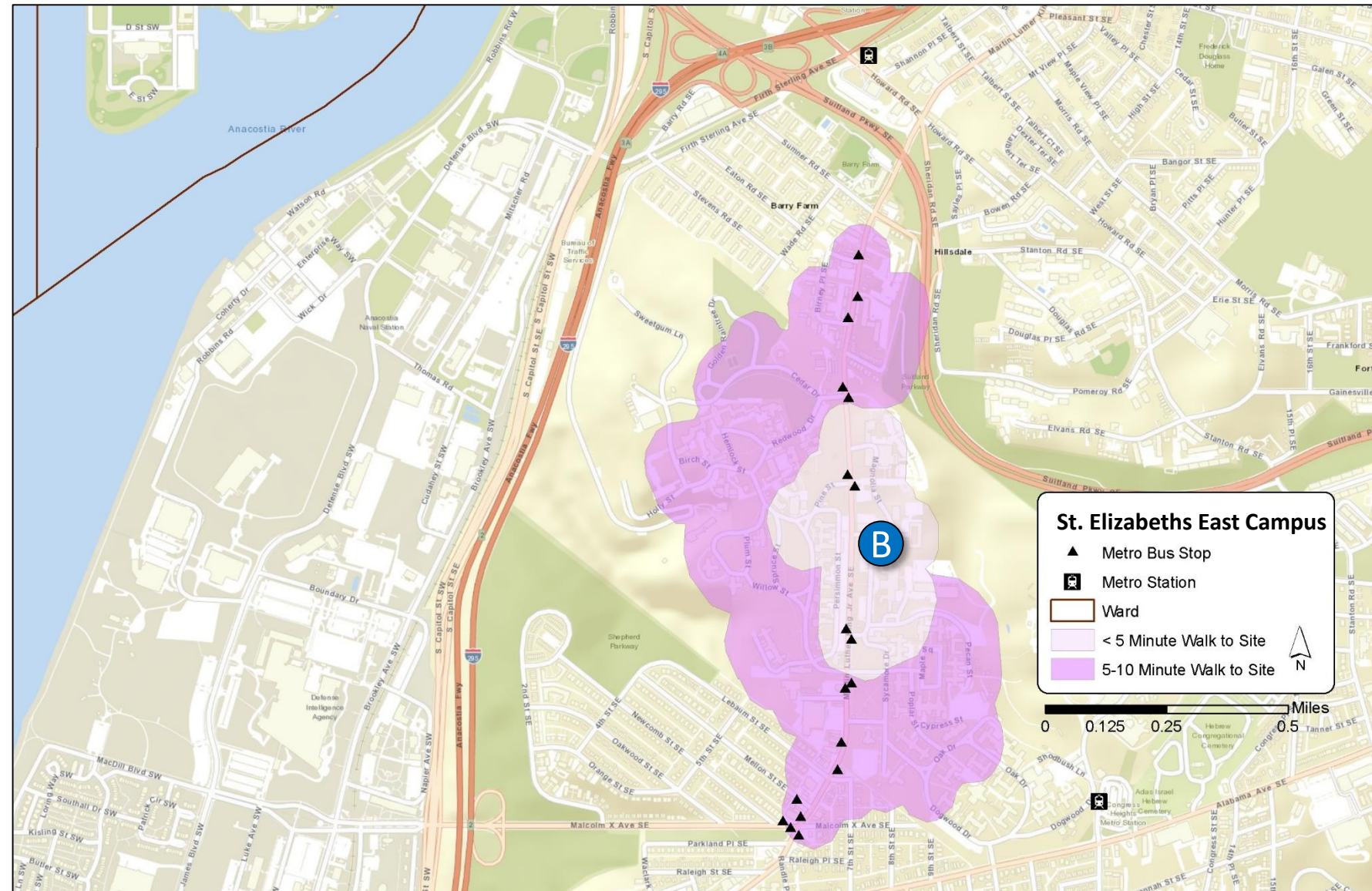
Street Frontage:

Martin Luther King, Jr. Boulevard, SE
Alabama Avenue, SE

Major Nearby Arteries:

Interstate 295
Suitland Parkway Freeway





Section 3.0

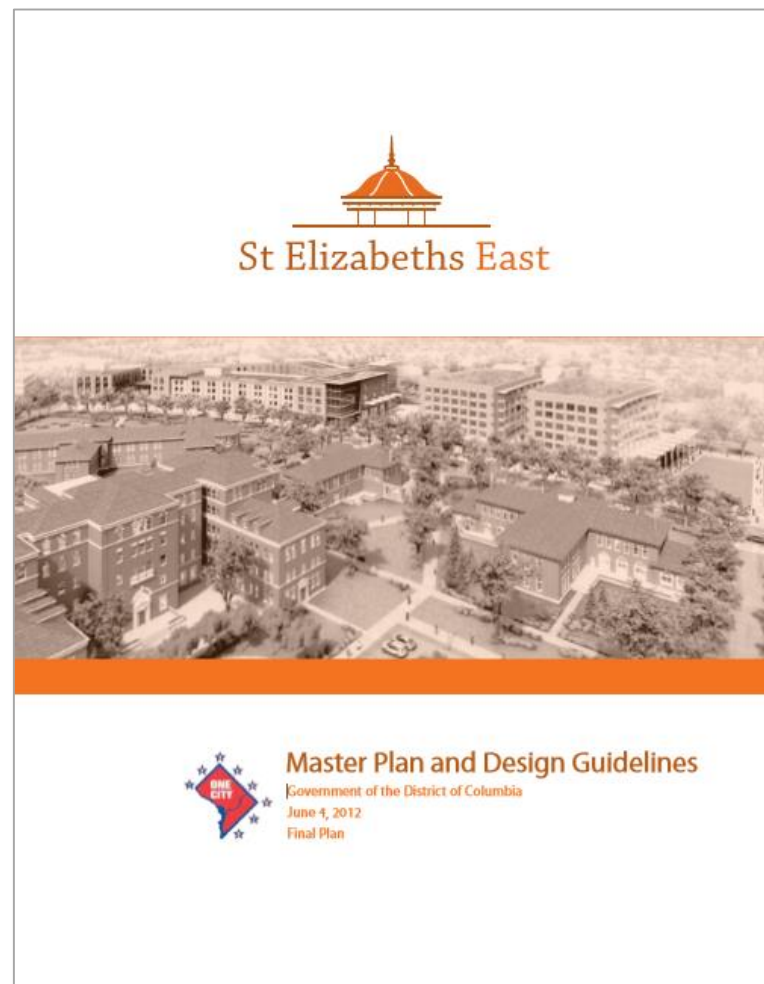
Construction Studies

3.0 OVERVIEW

This section provides preliminary cost estimates and scheduling information that has been developed based on a 144-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 additional 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 Emergency & Temporary Housing Facility is constructed on the Northeast corner of Parcel StE-2. Once the new Emergency & Temporary Housing Facility is operational in June 2020, the existing Emergency and Temporary Housing Facility, "801 East", will be demolished to allow the construction of two 800-car parking garages to begin.

Garage #2 will be located .3 miles from the Entertainment Sports Arena and be dedicated to ESA parking.

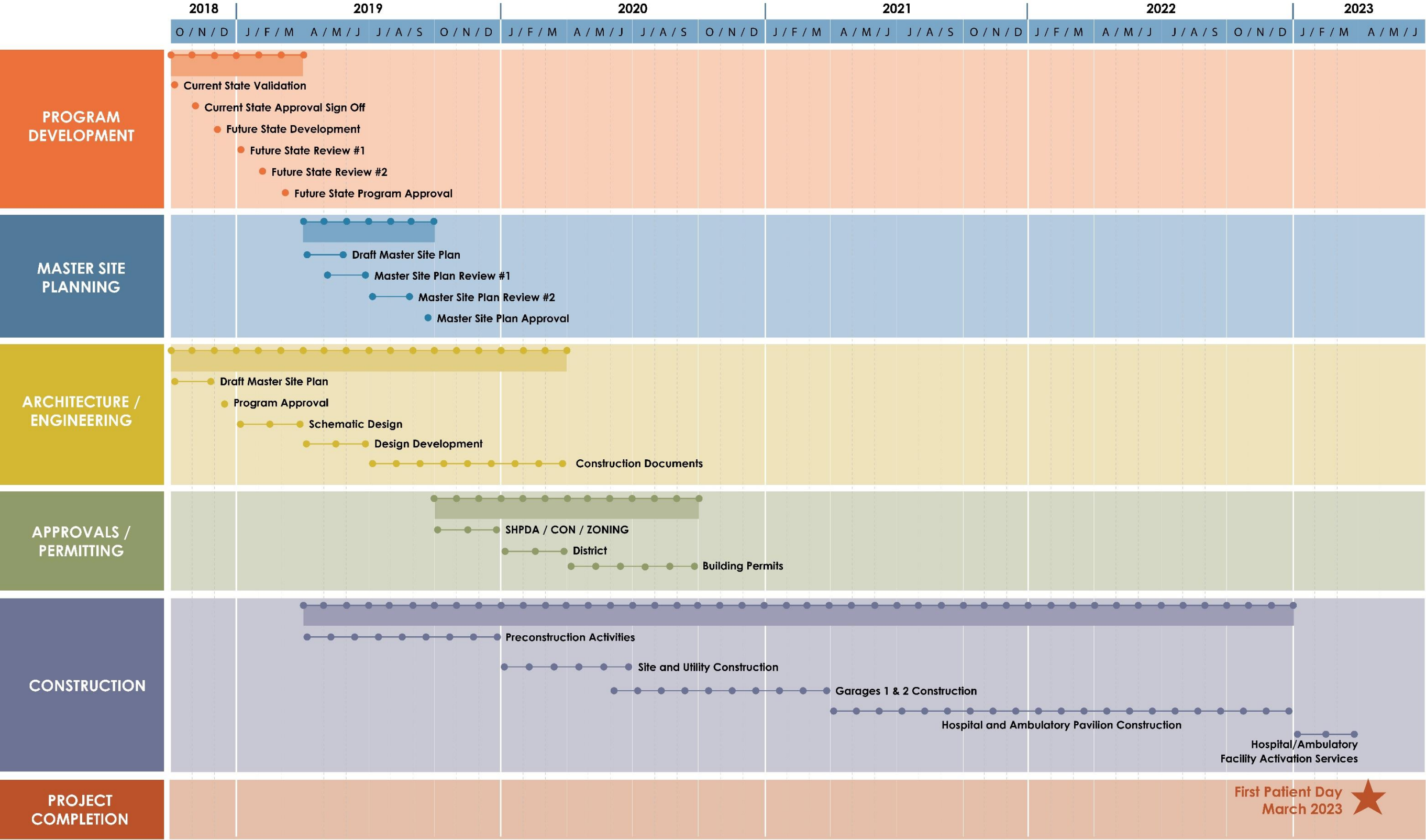
Garage #1 will be connected directly to the Ambulatory Care Pavilion and Hospital and will be dedicated parking for the healthcare campus.

Both garages will be completed and operational by March 2021.

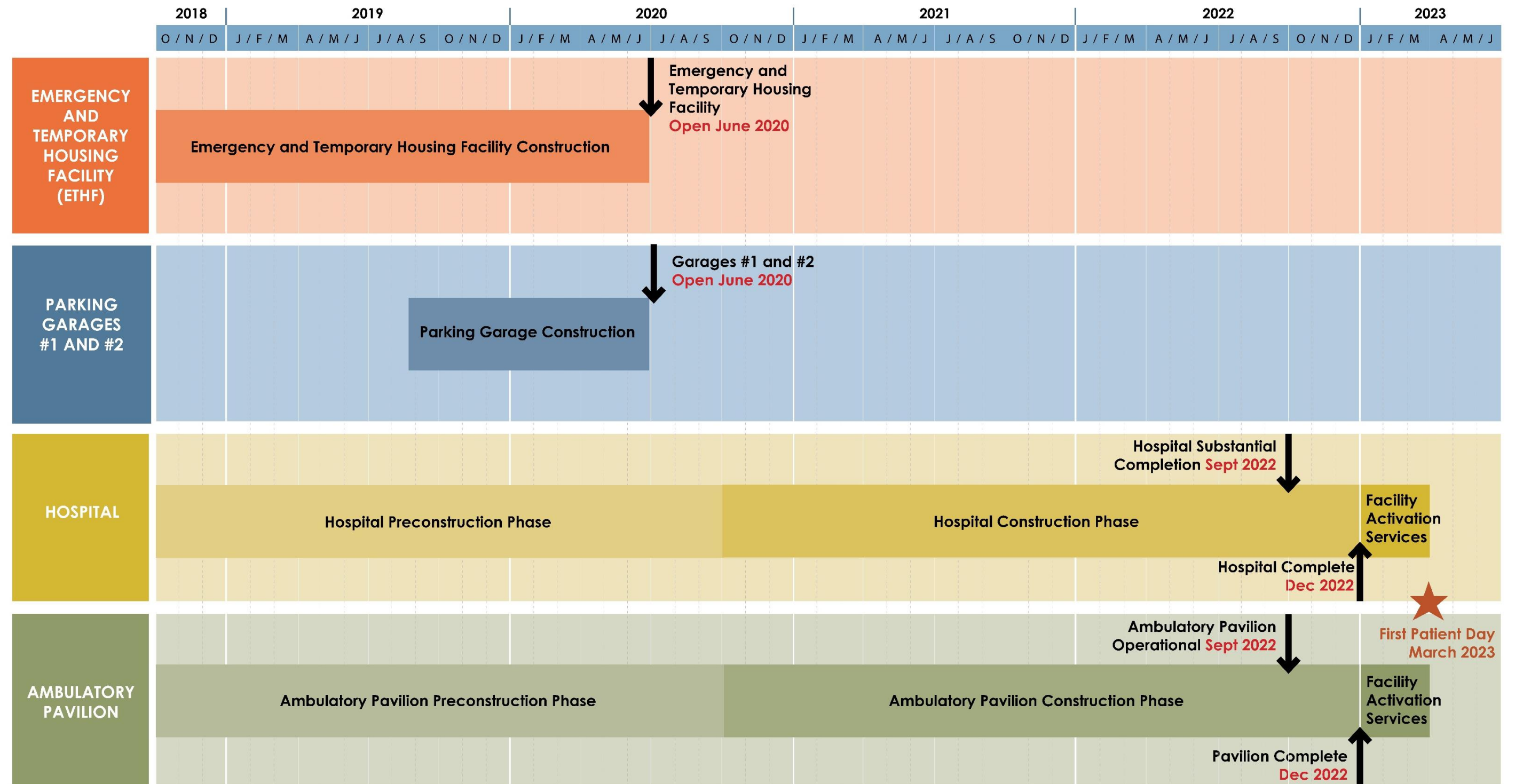
Not being able to commence major construction the hospital site until March 2021 could have an impact on the feasibility of opening the hospital in Spring of 2023.

HBS is recommending a study be conducted on the feasibility of having the ESA garage (Garage #2) constructed on an alternative parcel.

3.2 EXECUTIVE SUMMARY SCHEDULE



3.3 PRELIMINARY MASTER PROJECT SCHEDULE



3.3 PRELIMINARY PROJECT BUDGETS

3.4.1 OVERVIEW

In this section we have provided preliminary project budget estimates for the new health campus including the 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.

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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 <ul style="list-style-type: none">• Structural• HVAC / Fire Protection• Electrical• Plumbing• Civil• Landscape Architecture	\$12,000,000
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) <ul style="list-style-type: none">• LEED Certification• Pneumatic Tube• Code Consultant• Helipad Design• Laboratory Consultant• Surveyor	\$150,000
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) <ul style="list-style-type: none">• 144 Inpatient Beds• ICU / CCU• Emergency Room / Urgent Care• Shared Diagnostic & Testing• Shared Surgery with Ambulatory Pavilion	\$93,600,000
Ambulatory Pavilion (80,000 SF) <ul style="list-style-type: none">• PT / OT• Out Patient Imaging• Laboratory• Ambulatory Surgery Center• Pharmacy Shared with Hospital• Physician Offices	\$22,500,000
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
• Overhead Paging	
• OR Cameras	
• IP Access Control	
• Security	
• Video Integration	
• Telemed	
• Nurse Call	
• Bed Management Cable	
IT / IS Systems	\$10,000,000
• Network Equipment	
• Wireless Access	
• Nework Appliances	
• Workstation Equipment (PCs, Printers, Arms, Cabinents)	
• 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

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.



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

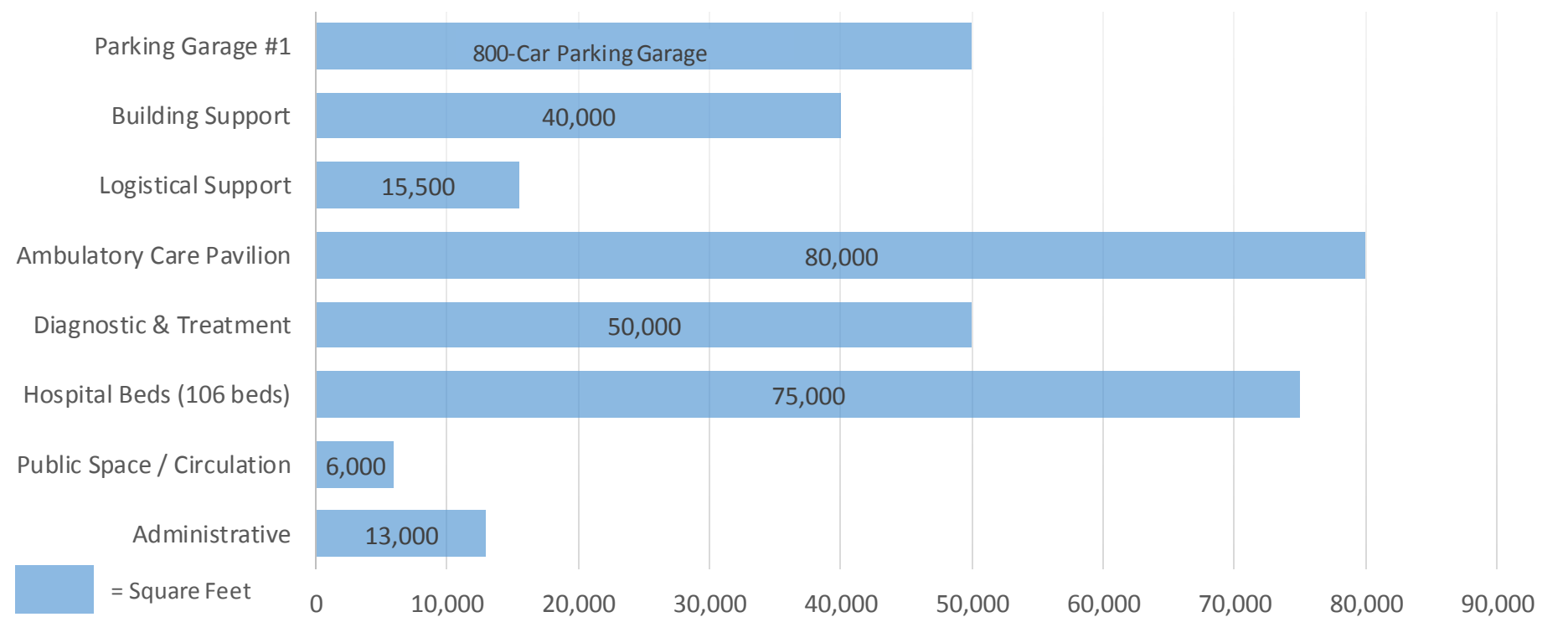
The “Strawman” Program requirements consisted of the following components:

- 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:

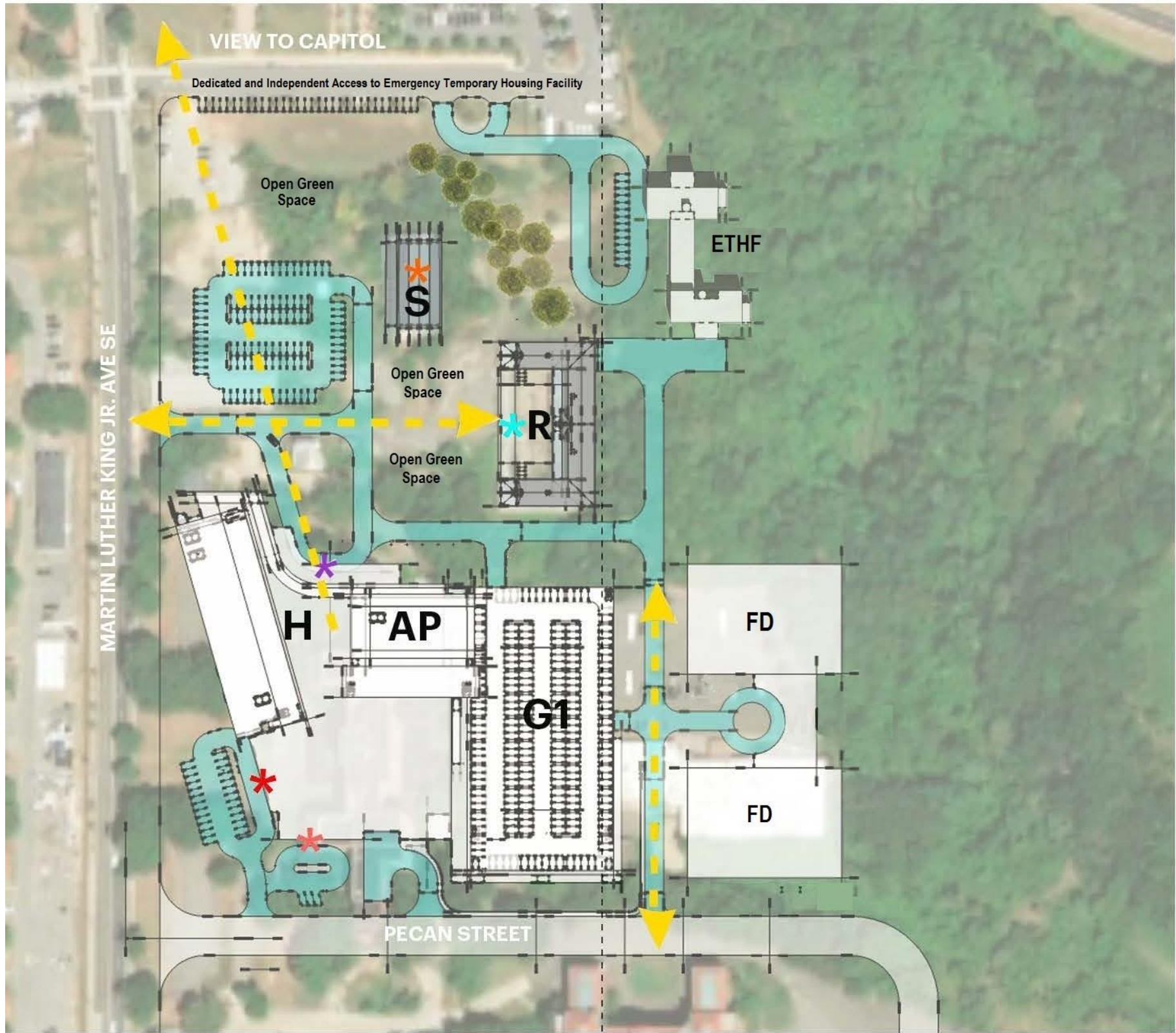
- Reduce the number of patient beds from 144 to 106 for the hospital. However, the hospital should be designed and engineered to accommodate a vertical expansion of two floors at a later date to provide 36 additional beds.
- Relocate Garage #2 (dedicated to ESA parking) to Parcel StE-6 instead of where 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:

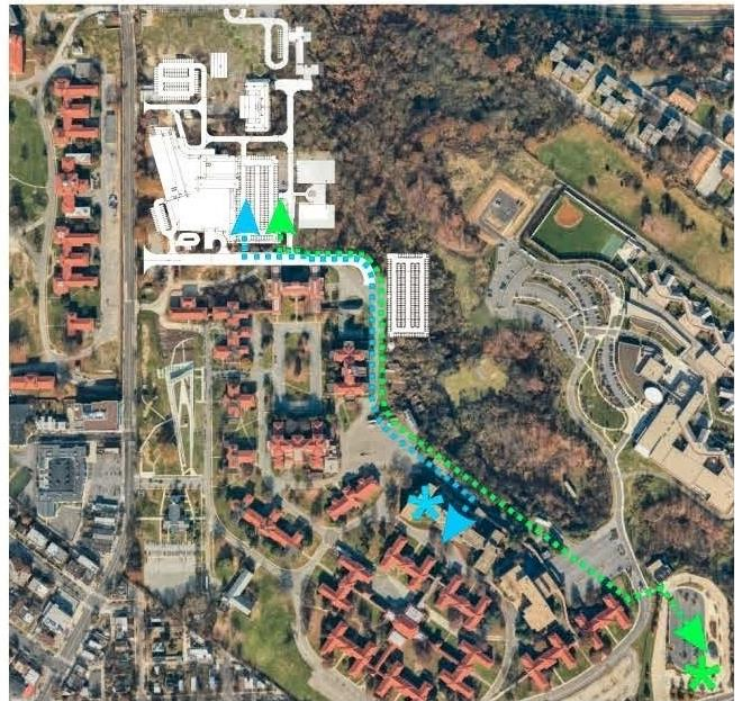
- The Hospital is sited to allow easy access and egress from MLK Boulevard and angled to provide views to the Capitol Building.
- The main entrances to both the Hospital and Ambulatory Pavilion features vehicular drop off zones for patients and visitors with easy access to the parking garage.
- Emergency 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
- * WALKING DISTANCE TO METRO FROM G1 = .5 MILES

SITE PLAN

2.3 PRELIMINARY HOSPITAL PERSPECTIVES

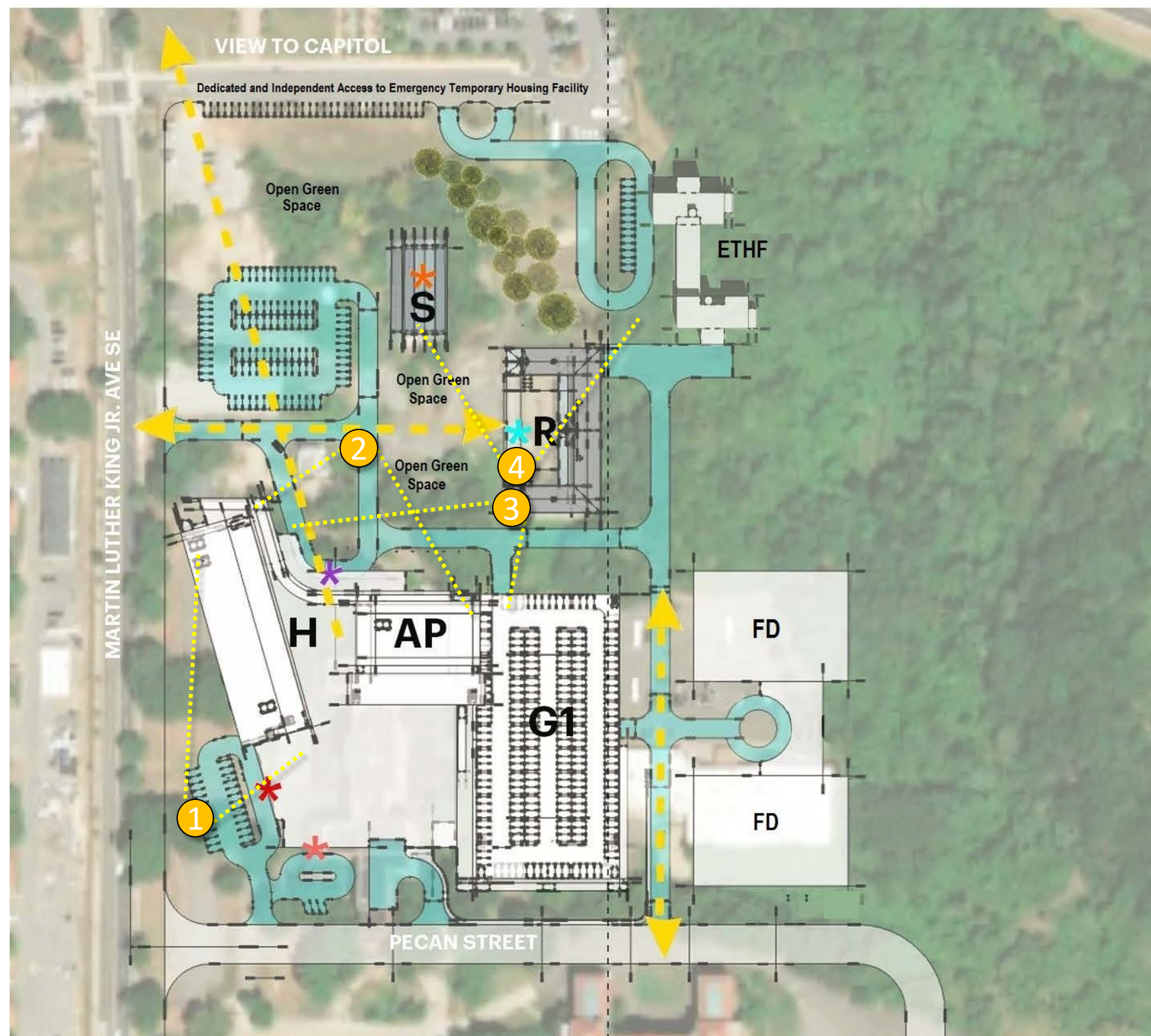
Recognizing the District is considering working with an independent operator for the new hospital, HBS prepared preliminary renderings for the new Hospital and Ambulatory Pavilion.

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

Detailed Site Study



Detailed Site Study

Detailed Site Study

Detailed Site Study

Detailed Site Study



Detailed Site Study

2.4.2 PERSPECTIVES OF GARAGE #2 AND FUTURE DEVELOPMENT



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Section 3.0

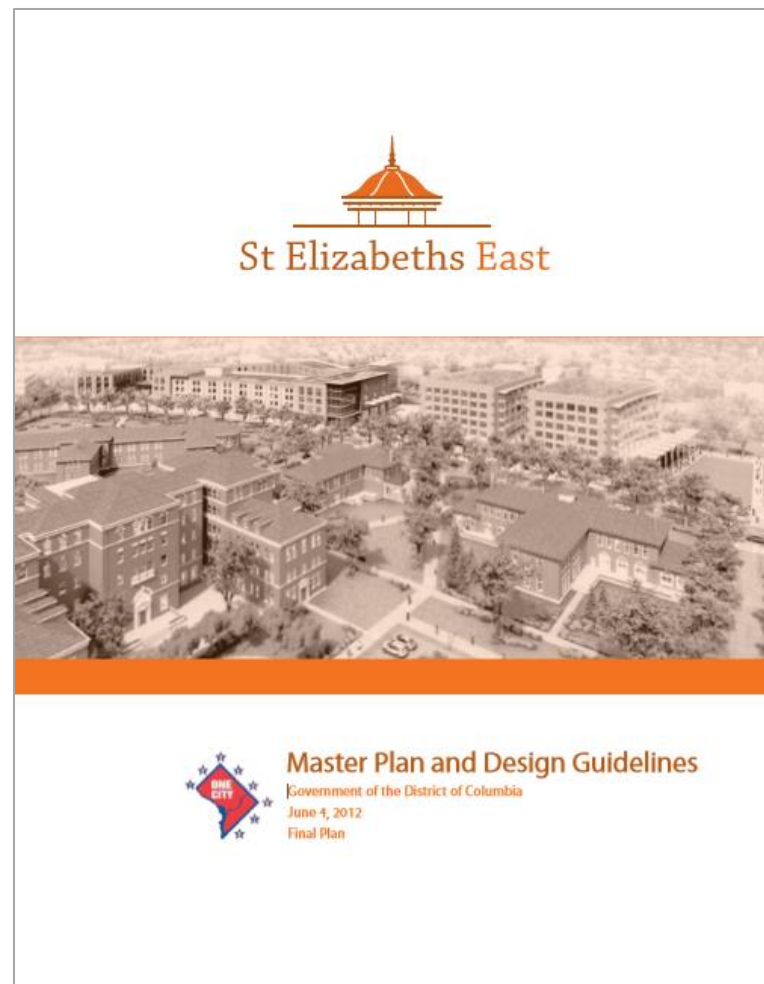
Cost and Schedule Impact

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.

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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.

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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.

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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.

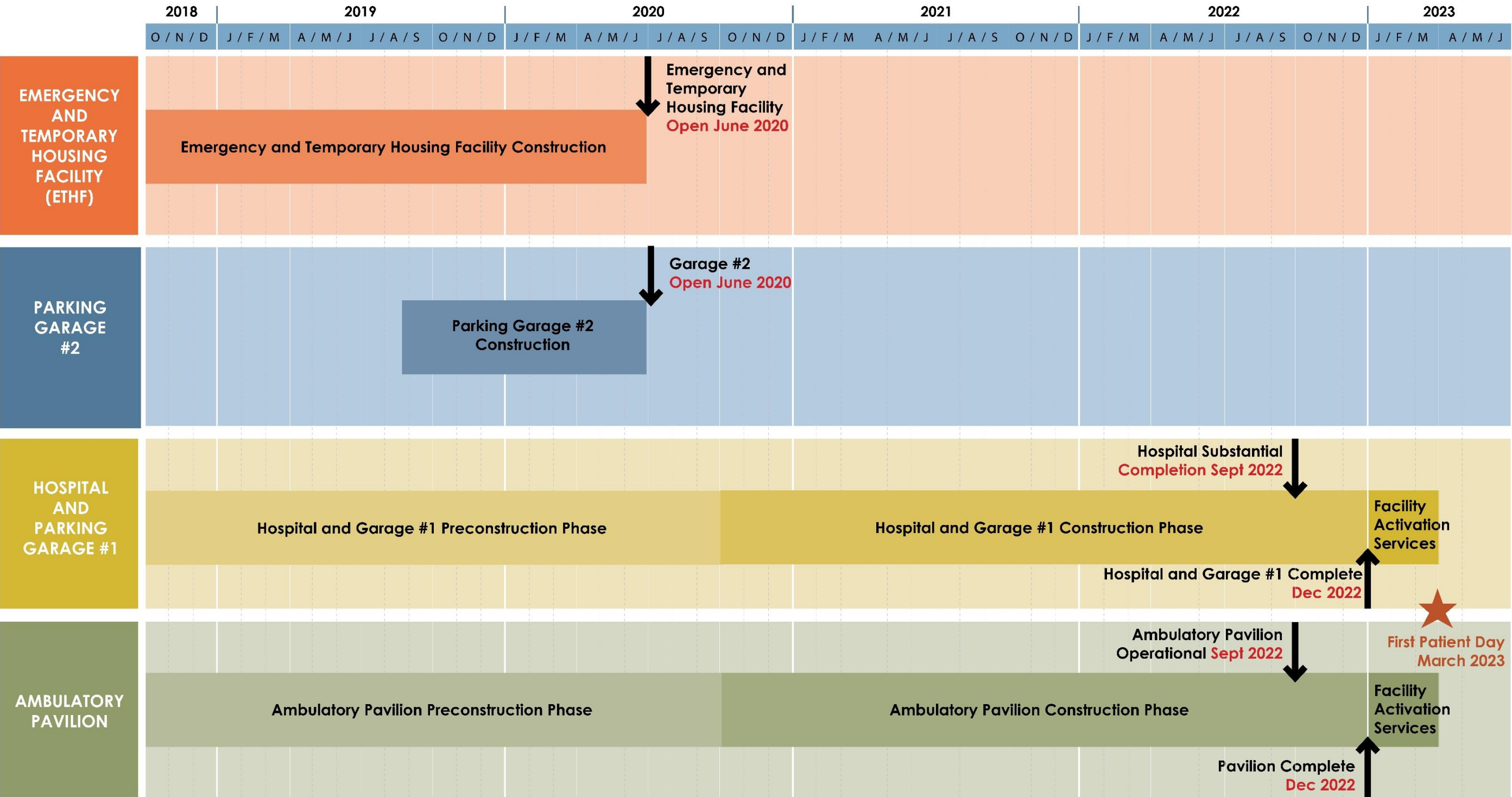
There is a temporary parking lot being constructed on StE-2 following the demolition of the Dix Pavilion.

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
• 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
• 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
• 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
• 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
• Overhead Paging	
• OR Cameras	
• IP Access Control	
• Security	
• Video Integration	
• Telemed	
• Nurse Call	
• Bed Management Cable	
IT / IS Systems	\$9,800,000
• Network Equipment	
• Wireless Access	
• Nework Appliances	
• Workstation Equipment (PCs, Printers, Arms, Cabinents)	
• 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

