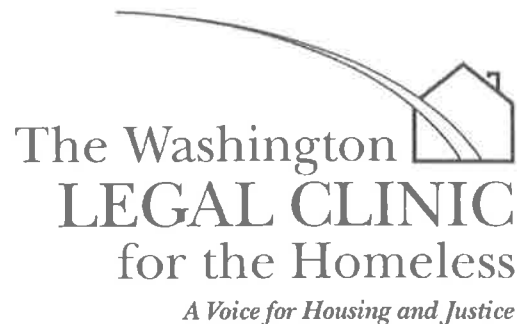


True Reformer Building
1200 U Street, NW
Washington, DC 20009
(202) 328-5500
www.legalclinic.org
@washlegalclinic

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**Testimony before the DC Council Committee on Facilities and Procurement
Performance Oversight Hearing on the DC Department of General Services (DGS)
Presented by Max Tipping
February 28, 2019**

Good morning Councilmember White and members of the Committee on Facilities and Procurement. My name is Max Tipping and I am a Staff Attorney and Spitzer Fellow at the Washington Legal Clinic for the Homeless. The Legal Clinic envisions – and since 1987 has worked towards – a just and inclusive community for all residents of the District of Columbia, where housing is a human right and where every individual and family has equal access to the resources they need to thrive. My testimony today will focus on the District's current efforts to renovate or redevelop several of its shelters for single adults experiencing homelessness.

I imagine that it won't be controversial to point out that the shelters that DGS oversees are in poor shape. Indeed, last year the Mayor's budget documents referred to shelters with "deplorable conditions" that were "unsafe for both residents and staff." See Attachment 1. Those documents also noted that due to poor shelter conditions "many individuals experiencing homelessness choose to live on the street rather than in the shelter," and that "poor shelter conditions are a key factor in the development of encampments throughout the District." *Id.* Granted, this transparency was fleeting, as all of this language has since been deleted from those documents. *Id.*

The Legal Clinic applauds the Mayor's recognition that substantial investments are needed to make DC's singles shelters safe and sanitary. The Mayor and Council deserve significant gratitude for last year's capital investments in the shelter system. Now the task before this Committee is to ensure that those funds are appropriately utilized to benefit those experiencing homelessness in the District.

Each project currently underway has its own unique challenges that DGS and this Committee will need to consider. For example, at Harriett Tubman Shelter one of the big questions will be how to demolish nearby buildings in a way that does not jeopardize the health or safety of the women staying at the shelter. In contrast, for New York Avenue Shelter a central concern will be how the renovation of the existing shelter can safely take place with residents still occupying parts of the building. The Legal Clinic would encourage maximum resident involvement in resolving these issues as well as in any programmatic or design decisions.



It seems clear, however, that by far the most complicated project is the replacement of 801 East Shelter. The new shelter is to be built north of the current shelter location on what's referred to as Parcel 2 of the old St. Elizabeth's campus. DGS released a design/build RFP for the project in late December and accepted proposals through February 19. With a \$40 million budget, this project is a rare opportunity to be able to build a shelter to specification. We are excited about the energy behind this project and the desire to have a replacement for 801 East as soon as possible. We also want to make sure it is done right.

The most important consideration for this project is that the proposed shelter has been sited on a former landfill. That's a statement worth repeating. The new shelter is to be built on an old landfill. Even if you knew no more than that, it would be obvious that such a project is highly risky and could go very wrong if not handled well.

According to the Phase I Environmental Site Assessment (ESA) conducted in 2018, the landfill "consisted of sewer cleanings, street sweepings, road construction debris, and incinerator fly ash." *See* Attachment 2. It was fully closed in 1989. *Id.* There appears to have been some limited sampling of the site in 1984, 1985, and 2008 to evaluate potential environmental hazards, but those records were not provided along with the RFP. A Geotechnical Report and a Phase II ESA were also conducted in 2018.

Based on what we've seen so far, we have three primary areas of concern:

1. **The soil of the proposed site is contaminated, but no one knows how contaminated.** The Phase II ESA found several toxins in the soil above the Residential Regional Screening Level (RSL), including Hexavalent Chromium, TPH-DRO, and dioxins. *See* Attachment 3. Notably, it did not appear to find any fly ash, suggesting that the sampling was not sufficient to determine the risks presented by the site. *Id.* Indeed, only three of the samples were from the actual footprint of the shelter, apparently because the slope was too steep to access the rest of the site. *Id.* So while it is clear that the soil poses risks, the limited sampling and spatial distribution does not show the extent and significance of the contamination of the shelter site. Put simply, what we know about the site is bad, but no one knows how bad.
2. **There are dangerous gases in the soil that require special engineering controls.** The Phase II ESA found Volatile Organic Compounds (VOCs), or hazardous gases in the soil, that exceeded the RSL. *Id.* As with the soil samples the sampling of soil gases was limited, involving only two samples under the footprint of the new shelter. *Id.* VOCs can migrate into the air of buildings if proper controls are not put into place. The Phase II ESA recommended installing engineering controls to prevent such migration, including a "vapor barrier in the subsurface and the installation of a sub-surface depressurization/venting system." *Id.* Based on the RFP documents, it is not clear whether these controls are contemplated in the specifications for the building.
3. **Designing and constructing a foundation for the building will be difficult and risky.** The footprint of the shelter is on "deep existing man-placed fill materials that are not suitable for foundation support [and] would require the building, in its current configuration and location, to be supported on a deep foundation system." *See* Attachment 4. However, the foundation could not go too deep because the building is directly over the Green line of the Metro. *Id.* In addition, the site has a steep slope. According to the Geotechnical Report, these conditions "make foundation design and installation difficult, at best" and "would place a significant amount of risk on the Owner." *Id.* Thus, in order for this project to be successful, DGS will need to find a contractor with experience designing and constructing foundations in such challenging circumstances that is willing to take on this risk.

Given these issues, there are two possible options for moving forward on this project:

1. **The shelter location on Parcel 2 could remain unchanged and these challenges could be addressed.** Based on the currently available information, no one knows whether this option can be done in way that does not risk the health or safety of the current and future residents of 801 East Shelter. Assuming that it is possible to do safely, it is likely to, at a minimum, require remediation of the soil and installing engineering controls for VOCs, as well as finding a contractor capable of constructing a foundation for a five-story building on a steep slope composed of man-placed fill materials over a Metro line. This option obviously entails a significant amount of risk for both the District and the current and future residents of the shelter.
2. **The shelter could be built on Parcel 1 of St. Elizabeth's instead.** Based on a General Site Assessment conducted at an unknown time, it seems that this option was considered but rejected because the zoning of Parcel 1 would not allow for a building of this size. *See* Attachment 5. It is not clear if this decision was made before or after the issues described above were identified. But given that simply moving the shelter to Parcel 1 and off of the landfill would potentially resolve all the foundation and environmental issues, it would seem prudent to consider whether a change in zoning would be the easier and safer option. Indeed, the Geotechnical Report "recommend[ed] that serious consideration be given to moving the building footprint as far to the west as is possible on the site - away from the slope and deeper man-placed fill materials." *See* Attachment 4. Such a choice, between changing zoning on the one hand and dealing with unknown hazards in the soil, VOC controls, and a complicated and risky foundation on the other hand, would seem to be straightforward.

Regardless of how things progress, open and honest communication will be crucial to the success of this project. The stakes are simply too high for the transitory transparency that is the norm for big projects like this. In order to ensure that this goes right, there will need to be full and timely disclosure of necessary documents by DGS, as well as rigorous oversight by this Committee. The challenges presented by this project are substantial and should be addressed head-on and out in the open.

However, if what's past is prologue, I am worried that this transparency will not happen. In early 2018 the Legal Clinic was concerned about the environmental risks posed by remediating and demolishing buildings that contained lead and asbestos around the DC General Shelter while families with children still lived there. In order to get more information on these risks we submitted a FOIA request to DGS on February 5, 2018. We only received responsive records in May after being forced to pay over \$1400 (which was later refunded after we retained counsel). We received a final response from DGS in late September, nearly eight months after submitting our request. Many of the records we received all those months later were heavily redacted. Furthermore, lead was discovered during demolition around the shelter months after remediation was supposed to have been completed. These interactions with the agency are concerning.

In sum, we are excited about the opportunity to build a new shelter to replace 801 East Shelter; its capacity will be a vital part of the safety net that the District's homeless services system provides. But we also want a new shelter that does not risk the health or safety of its occupants. From what we've seen so far, it does not appear that the District is even close to taking sufficient precautions to prevent harm to the supposed beneficiaries of this project. Responses to the design/build RFP were accepted through February 19, so there is still time for full and open consideration of these issues. I look forward to working with DGS and this Committee to ensure the safety of those impacted by this project.

Thank you for the opportunity to testify today.

Attachments

1. Excerpts of FY19 budget documents
2. Excerpts of 2018 Phase I ESA
3. Excerpts of 2018 Phase II ESA
4. Excerpts of 2018 Geotechnical Report
5. Excerpts of General Site Assessment

Attachment 1: Excerpts of FY19 budget documents

AM0-THK17-EMERGENCY AND TEMPORARY HOUSING UPGRADES

Agency: DEPARTMENT OF HUMAN SERVICES (JA0)
Implementing Agency: DEPARTMENT OF GENERAL SERVICES (AM0)
Project No: THK17
Ward:
Location: EMERY MEN'S SHELTER & BLAIR MEN'S SHELTE
Facility Name or Identifier: BUILDING RENOVATION
Status: Predesign
Useful Life of the Project: 30
Estimated Full Funding Cost: \$13,007,000

Description:

The purpose of the project is to increase the useful life of Emery and Blair Shelter infrastructure by performing critical upgrades.

Justification:

Both the Emery and Blair shelters have recently completed a feasibility study which concluded that **each site is in deplorable conditions and is unsafe for both residents and staff**. Recommendations for rehabilitation include replacing subfloors throughout the space, replacing existing doors with fire-rated doors which comply with national fire codes, replacing damaged hand rails, replacing existing ramps to comply with ADA code and renovating existing bathrooms, etc. There is urgency because each site is currently occupied. These upgrades will both enhance the neighborhood and support development efforts in the DC area. The current and future residents of each facility will have a dramatic improvement to their safety and living conditions. These plans are consistent with two FY 2019 Mayoral Priorities:

1. Expand efforts to produce, preserve and protect affordable housing.

2. Continue efforts to make homelessness rare, brief and non-recurring.

This project is necessary because of the existing conditions at each site. This project would provide its low barrier residents with a safe environment.

Progress Assessment:

N/A

Related Projects:

N/A

(Dollars in Thousands)

Dollars in Thousands)

Funding By Phase - Prior Funding						Proposed Funding						
Phase	Allotments	Spent	Encr/D-Adv	Pre-Enc	Balance	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	6 Yr Total
(01) Design	300	70	120	0	110	0	0	0	0	0	0	0
(04) Construction	1,200	0	0	1,200	0	6,949	4,558	0	0	0	0	11,507
TOTALS	1,500	70	120	1,200	110	6,949	4,558	0	0	0	0	11,507

Funding By Source - Prior Funding						Proposed Funding						
Source	Allotments	Spent	Enc/D-Adv	Pre-Enc	Balance	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	6 Yr Total
GO Bonds - New (0300)	0	0	0	0	0	6,949	4,558	0	0	0	0	11,507
Pay Go (0301)	1,500	70	120	1,200	110	0	0	0	0	0	0	0
TOTALS	1,500	70	120	1,200	110	6,949	4,558	0	0	0	0	11,507

Additional Appropriation Data

First Appropriation FY	2016
Original 6-Year Budget Authority	1,500
Budget Authority Through FY 2023	1,500
FY 2018 Budget Authority Changes	0
6-Year Budget Authority Through FY 2023	1,500
Budget Authority Request Through FY 2024	13,007
Increase (Decrease)	11,507

Estimated Operating Impact Summary

Expenditure (+) or Cost Reduction (-)	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	6 Yr Total
No estimated operating impact							

Milestone Data

	Projected	Actual
Environmental Approvals		
Design Start (FY)	03/31/2018	
Design Complete (FY)	08/31/2018	
Construction Start (FY)	09/30/2018	
Construction Complete (FY)	06/20/2020	
Closeout (FY)	07/31/2020	

Full Time Equivalent Data

Object	FTE	FY 2019 Budget	% of Project
Personal Services	0.0	0	0.0
Non Personal Services	0.0	6,949	100.0

AM0-THK17-EMERGENCY AND TEMPORARY HOUSING UPGRADES

Agency: DEPARTMENT OF HUMAN SERVICES (JA0)
Implementing Agency: DEPARTMENT OF GENERAL SERVICES (AM0)
Project No: THK17

Ward:

Location: 1725 LINCOLN RD NE & 635 I ST NE

Facility Name or Identifier: EMERY MEN'S SHELTER/BLAIR MEN'S SHELTER

Status: Ongoing Subprojects

Useful Life of the Project: 30

Estimated Full Funding Cost: \$13,007,000

Description:

The purpose of the project is to increase the useful life of Emery and Blair Shelter infrastructure by performing critical upgrades.

Justification:

Both the Emery and Blair shelters have recently completed a feasibility study which concluded that each site is in need of significant upgrades.

Recommendations for rehabilitation include replacing subfloors throughout the space, replacing existing doors with fire-rated doors which comply with national fire codes, replacing damaged hand rails, replacing existing ramps to comply with ADA code and renovating existing bathrooms, etc. There is urgency because each site is currently occupied. The current and future residents of each facility will have a dramatic improvement to their safety and living conditions. These plans are consistent with two FY 2019 Mayoral Priorities:

1. Expand efforts to produce, preserve and protect affordable housing.

2. Continue efforts to make homelessness rare, brief and non-recurring.

This project is necessary because of the existing conditions at each site. This project would provide its low barrier residents with a safe environment.

Progress Assessment:

Ongoing project.

Related Projects:

N/A

(Dollars in Thousands)

Funding By Phase - Prior Funding						Proposed Funding						
Phase	Allotments	Spent	Enc/ID-Adv	Pre-Enc	Balance	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	6 Yr Total
(01) Design	300	70	120	0	110	0	0	0	0	0	0	0
(04) Construction	1,200	0	0	1,200	0	6,949	4,558	0	0	0	0	11,507
TOTALS	1,500	70	120	1,200	110	6,949	4,558	0	0	0	0	11,507

Funding By Source - Prior Funding						Proposed Funding						
Source	Allotments	Spent	Enc/ID-Adv	Pre-Enc	Balance	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	6 Yr Total
GO Bonds - New (0300)	0	0	0	0	0	6,949	4,558	0	0	0	0	11,507
Pay Go (0301)	1,500	70	120	1,200	110	0	0	0	0	0	0	0
TOTALS	1,500	70	120	1,200	110	6,949	4,558	0	0	0	0	11,507

Additional Appropriation Data

First Appropriation FY	2016
Original 6-Year Budget Authority	1,500
Budget Authority Through FY 2023	1,500
FY 2018 Budget Authority Changes	0
6-Year Budget Authority Through FY 2023	1,500
Budget Authority Request Through FY 2024	13,007
Increase (Decrease)	11,507

Estimated Operating Impact Summary

Expenditure (+) or Cost Reduction (-)	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	6 Yr Total
No estimated operating impact							

Milestone Data

Projected	Actual
Environmental Approvals	
Design Start (FY)	03/31/2018
Design Complete (FY)	08/31/2018
Construction Start (FY)	09/30/2018
Construction Complete (FY)	06/20/2020
Closeout (FY)	07/31/2020

Full Time Equivalent Data

Object	FTE	FY 2019 Budget	% of Project
Personal Services	0.0	0	0.0
Non Personal Services	0.0	6,949	100.0

AM0-THK18-NEW YORK AVENUE UPGRADES/RENOVATIONS

Agency: DEPARTMENT OF HUMAN SERVICES (JA0)
Implementing Agency: DEPARTMENT OF GENERAL SERVICES (AM0)
Project No: THK18
Ward: 1
Location: 1355 NY AVE NE
Facility Name or Identifier: NEW YORK AVENUE SHELTER
Status: New
Useful Life of the Project: 15
Estimated Full Funding Cost: \$8,535,000

Description:

The New York Ave Men's Shelter desperately needs a renovation to transform it from a dilapidated facility that has outlived its life cycle into a clean, safe, inviting, state of the art facility that will house approximately 380 single men during hypothermia season. The space will allow for 150 beds to support the large disabled population and 25 beds to support an ADA compliant respite area. The renovated space will also be designed to support a daytime program to allow for additional case work and services as well as clinic which serves the homeless community.

The renovation of the New York Avenue Men's Shelter is necessary due to the deteriorating conditions of the building. The wear and tear of daily use by such a large population (360 men) has taken its toll and pushed the building beyond its useful life. The District also needs to support the large disabled population with ADA compliant facilities. In addition to wear and tear, which makes the site appear to be unsafe and dirty, there are a number of infrastructure problems including a leaking roof, plumbing and electrical issues. The infrastructure issues lead to frequent repairs (often requiring residents to relocate to alternative sites) which are time consuming and costly, but only short-term patches. Further, the facility is in such poor condition that it appears to be unsafe and unclean. As a result, many individuals experiencing homelessness choose to live on the street rather than in the shelter. The poor shelter conditions are a key factor in the development of encampments throughout the District.

If funding is not approved and issues are not addressed, it may result in unsafe living conditions and system outages that ultimately require the District to relocate the residents for an extended period. There are few alternatives in terms of sites to house displaced residents from the shelter.

This project fits in to the Mayor's priorities to end homelessness and provide adequate living accommodations. Further, the rapid development of the neighborhood will likely be thwarted by the poor condition of the facility as developers avoid being proximate to a blighted facility.

This property has a history of recurring maintenance issues which have created emergency situations that have displaced residences on multiple occasions.

Justification:

The renovation of the New York Avenue Men's Shelter is necessary due to the deteriorating conditions of the building. The wear and tear of daily use by such a large population (360 men) has taken its toll and pushed the building beyond its useful life. The District also needs to support the large disabled population with ADA compliant facilities. In addition to wear and tear, which makes the site appear to be unsafe and dirty, there are a number of infrastructure problems including a leaking roof, plumbing and electrical issues. The infrastructure issues lead to frequent repairs (often requiring residents to relocate to alternative sites) which are time consuming and costly, but only short-term patches. Further, the facility is in such a condition that many individuals experiencing homelessness choose to live on the street rather than in the shelter. The poor shelter conditions are a key factor in the development of encampments throughout the District.

Progress Assessment:

New project

Related Projects:

N/A

(Dollars in Thousands)

Phase	Funding By Phase - Prior Funding					Proposed Funding						
	Allotments	Spent	Enc/ID-Adv	Pre-Enc	Balance	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	6 Yr Total
(04) Construction	0	0	0	0	0	850	7,685	0	0	0	0	8,535
TOTALS	0	0	0	0	0	850	7,685	0	0	0	0	8,535

Source	Funding By Source - Prior Funding					Proposed Funding						
	Allotments	Spent	Enc/ID-Adv	Pre-Enc	Balance	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	6 Yr Total
GO Bonds - New (0300)	0	0	0	0	0	850	7,685	0	0	0	0	8,535
TOTALS	0	0	0	0	0	850	7,685	0	0	0	0	8,535

Additional Appropriation Data

First Appropriation FY	
Original 6-Year Budget Authority	0
Budget Authority Through FY 2023	0
FY 2018 Budget Authority Changes	0
6-Year Budget Authority Through FY 2023	0
Budget Authority Request Through FY 2024	8,535
Increase (Decrease)	8,535

Estimated Operating Impact Summary

Expenditure (+) or Cost Reduction (-)	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	6 Yr Total
No estimated operating impact							

Milestone Data

	Projected	Actual
Environmental Approvals		
Design Start (FY)	11/28/2019	
Design Complete (FY)	07/31/2019	
Construction Start (FY)	03/31/2020	
Construction Complete (FY)	08/31/2021	
Closeout (FY)	09/30/2021	

Full Time Equivalent Data

Object	FTE	FY 2019 Budget	% of Project
Personal Services	0.0	0	0.0
Non Personal Services	0.0	850	100.0

AM0-THK18-NEW YORK AVENUE UPGRADES/RENOVATIONS

Agency: DEPARTMENT OF HUMAN SERVICES (JA0)
Implementing Agency: DEPARTMENT OF GENERAL SERVICES (AM0)
Project No: THK18
Ward: 5
Location: 1355 NY AVE NE
Facility Name or Identifier: NEW YORK AVENUE SHELTER
Status: New
Useful Life of the Project: 15
Estimated Full Funding Cost: \$8,535,000

Description:

The New York Ave Men's Shelter desperately needs a renovation to transform it from a worn facility that has outlived its life cycle into a clean, safe, inviting, state of the art facility that will house approximately 380 single men during hypothermia season. The renovated space may also be designed to support a daytime program to allow for additional case work and possible respite beds, and a clinic which serves the homeless community.

Justification:

The renovation of the New York Avenue Men's Shelter is necessary due to the deteriorating conditions of the building. The wear and tear of daily use by such a large population (360 men) has taken its toll and pushed the building beyond its useful life. The District also needs to support the large disabled population with ADA compliant facilities. In addition to wear and tear, which makes the site appear to be unsafe and dirty, there are a number of infrastructure problems including a leaking roof, plumbing and electrical issues. The infrastructure issues lead to frequent repairs (often requiring residents to relocate to alternative sites) which are time consuming and costly, but only short-term patches. The property has a history of recurring maintenance issues which have created emergency situations that have displaced residences on multiple occasions.

Progress Assessment:

New project

Related Projects:

N/A

(Dollars in Thousands)

Funding By Phase - Prior Funding						Proposed Funding					
Phase	Allotments	Spent	Enc/D-Adv	Pre-Enc	Balance	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024
(04) Construction	0	0	0	0	0	850	7,685	0	0	0	0
TOTALS	0	0	0	0	0	850	7,685	0	0	0	0

Funding By Source - Prior Funding						Proposed Funding					
Source	Allotments	Spent	Enc/D-Adv	Pre-Enc	Balance	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024
GO Bonds - New (0300)	0	0	0	0	0	850	7,685	0	0	0	0
TOTALS	0	0	0	0	0	850	7,685	0	0	0	0

Additional Appropriation Data

First Appropriation FY
Original 6-Year Budget Authority
Budget Authority Through FY 2023
FY 2018 Budget Authority Changes
6-Year Budget Authority Through FY 2023
Budget Authority Request Through FY 2024
Increase (Decrease)

0
0
0
0
8,535
8,535

Estimated Operating Impact Summary

Expenditure (+) or Cost Reduction (-)
No estimated operating impact

FY 2019 FY 2020 FY 2021 FY 2022 FY 2023 FY 2024 6 Yr Total

Milestone Data

Environmental Approvals
Design Start (FY)
Design Complete (FY)
Construction Start (FY)
Construction Complete (FY)
Closeout (FY)

Projected
11/28/2019
07/31/2019
03/31/2020
08/31/2021
09/30/2021

Full Time Equivalent Data

Object
FTE FY 2019 Budget % of Project
Personal Services 0.0 0 0.0
Non Personal Services 0.0 850 100.0

Attachment 2: Excerpts of 2018 Phase I ESA

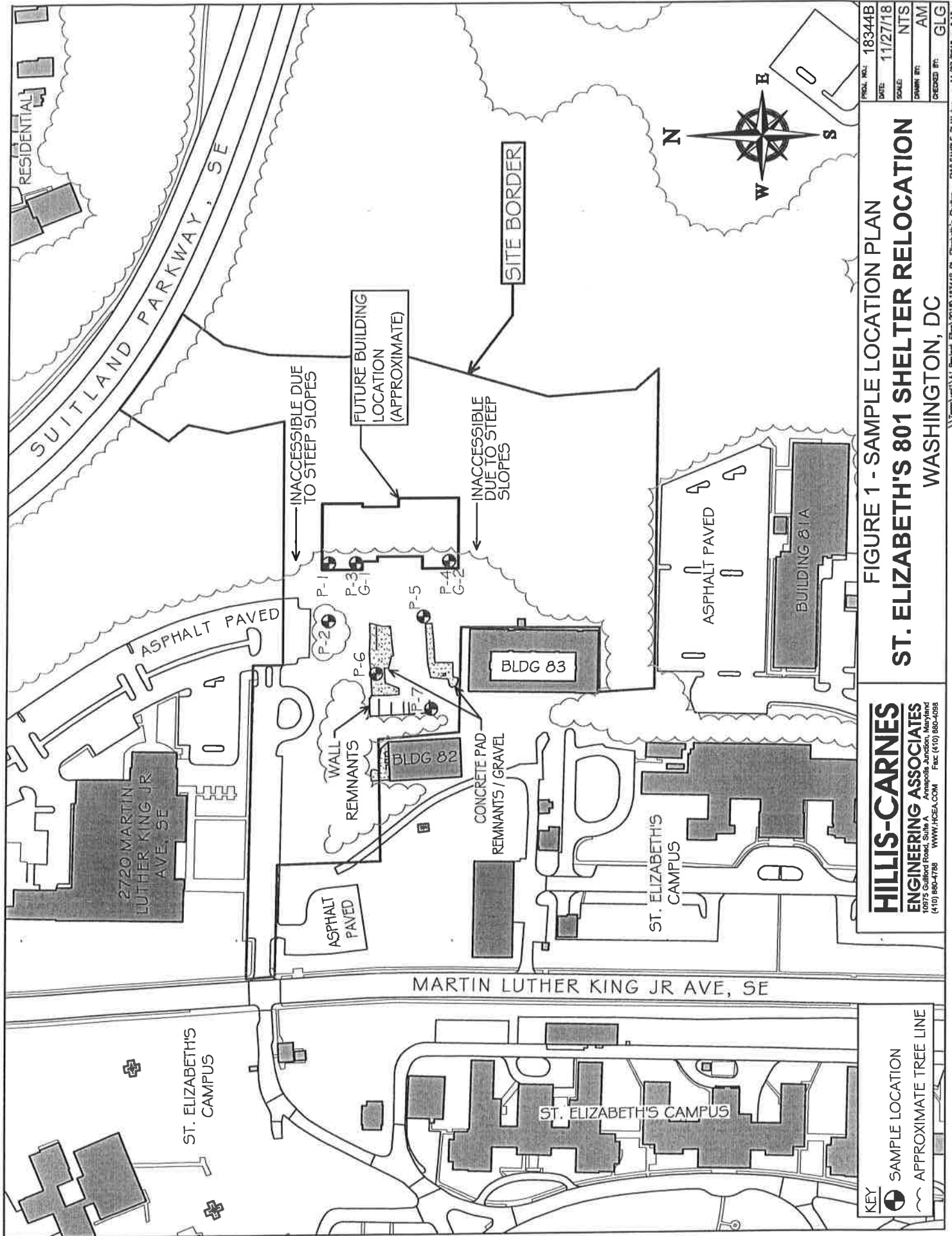
- (excluding areas that have been filled or graded in association with an engineered site development project) without the prior knowledge;
- wastewater discharges (excluding stormwater; refer to Section 6.2 and municipal wastewater; refer to Section 6.3, as applicable) into a ditch, drain, underground injection system, or stream on or adjacent to the Site;
 - wells (including dry wells, irrigation wells, injection wells, abandoned wells, or other wells); and
 - septic systems.
- During the site visit, HCCS observed the following:
- mounds or depressions suggesting solid waste disposal

Based on factors described in Section 6.4, it is HCCS's opinion that these conditions are not considered to be a REC to the Site.

- It must be noted that EDR's report identifies 2700 Martin Luther King Jr Avenue (St. Elizabeth's Hospital) and 2701 Martin Luther King Jr Avenue (GSA-Saint Elizabeth's West Campus) as being part of the Site (target property). These two addresses are included on the FINDS database. 2700 Martin Luther King Jr Avenue is located approximately 450 feet south of the Site and 2701 Martin Luther King Jr Avenue adjoins the Site to the northwest (across from Martin Luther King Jr Avenue). Therefore, for the purposes of this report, HCCS has determined that there are no on-site listings associated with the Site. Refer to the below paragraphs for information pertaining to the off-site database listings.
- Based on HCCS's review of the historical records sources described previously, a portion of the central portion of the Site appears to be paved since at least 1937. The remaining portions of the Site were mainly vegetated, with two stables being present on the Site from at least 1927 until approximately 1995. A portion of the central area of the Site was used as a landfill that reportedly consisted of storm sewer cleanings, street sweepings, road construction debris, and incinerator fly ash. According to the prior Phase I ESA (refer to Section 5.4.7) portions of the landfill area were closed in 1983, 1987, 1988 and the remaining area closed in 1989. In addition, the 2012 assessment reported that the closure consisted of an 18 to 30 inch cap. Further, sampling in the vicinity of the fill area was conducted in 1984 and 1985, which resulted in the detection of Chlorinated dioxins and furans in the ash fill and PCB-1260 in the pond sediments (the pond is not part of the Site as defined for HCCS's 2018 Phase I ESA). Lastly, according to the 2012 assessment, additional sampling was conducted in 2008 in a form of a composite sample that was collected from the fill ash. The results from this sampling were reportedly below the RCRA hazardous waste limits for metals and semi-volatile organic compounds that were analyzed.

In conclusion, the future on-site building is proposed to be constructed within the area of the previous landfill. Due to the reported contamination from the 1984 and 1985 sampling and the limited sampling from the 2008 activities (one composite sample), HCCS considers the landfill area to represent an REC to the Site. It must be noted that the Client/User has requested a Phase II ESA in conjunction with this Phase I ESA; however, the Phase II ESA on-site activities will not be completed prior to the issuance of this Phase I ESA report. The Phase II ESA will be presented to the Client/User in a separate assessment.

Attachment 3: Excerpts of 2018 Phase II ESA



PROJ. NO.	18344B
DATE	11/27/18
SCALE	NTS
DRAWN BY	AM
CHECKED BY	GLG

FIGURE 1 - SAMPLE LOCATION PLAN
ST. ELIZABETH'S 801 SHELTER RELOCATION
 WASHINGTON, DC

HILLIS-CARNES
 ENGINEERING ASSOCIATES
 10975 Guilford Road, Suite A
 Annapolis Junction, Maryland
 (410) 880-4788 WWW.HCEA.COM Fax (410) 880-4098

KEY
 ● SAMPLE LOCATION
 ~ APPROXIMATE TREE LINE

4.0 SOIL SAMPLING PROGRAM

The advancement of borings was performed at the Site on October 24 and 25, 2018, by Mr. Robert Pushman, HCCS's Environmental Project Manager.

Probes were advanced at seven (7) on-site locations on the Site. The probe locations are identified as P-1 through P-7. The sample locations are illustrated on the Sample Location Plan (Figure 1) included in this report.

Saturated soils or groundwater were not encountered within the depths explored in each of the probes. In addition, PID readings, discolored soil, and odors were not observed. With the exception of P-1, one soil sample from each of the borings was collected for laboratory analyses. The samples collected were placed in clean, laboratory-provided containers, labeled, placed in a cooler, packaged for transport, and delivered to the laboratory. The following Table 1 includes additional information pertaining to the probes.

**Table 1 - Conditions Encountered During Drilling of Environmental Soil Probes
3255 Prospect Street, NW, Washington, D.C.**

Probe Designation	Depth Interval (feet below ground surface)	Soils	Depth Interval of Sample Collected for Laboratory Analyses (feet bgs)
P-1	0-5	Clayey sand and gravel (Fill)	None collected (due to poor recovery of soil in liners and auger refusal)
	5-6 (probe refusal)	Black silty sand and gravel (Fill)	
P-2	0-5	Clayey sand and gravel (Fill)	15-20
	5-10	Black silty sand and gravel (Fill)	
	10-20	Clay (FILL)	
P-3	0-5	Clayey sand and gravel (Fill)	5-10
	5-10	Black silty sand and gravel (Fill)	
	10-20	Clay (Fill)	
P-4	0-7	Clayey sand and gravel (Fill)	Due to minimum soil recovery, a composite soil sample was collected from depths 5 feet through 20 feet
	7-18	Black silty sand and gravel (Fill)	
	18-20	Silty sand and gravel (Fill)	
P-5	0-6	Clayey sand and gravel (Fill)	10-15
	6-7	Black silty sand and gravel (Fill)	
	7-10	Clay (Fill)	
	10-15	Silty sand and gravel (Fill)	
	15-20	Clay (Fill)	

P-6	0-20	Clay	15-20
P-7	0-5	Clay (Fill)	5-10
	5-12	Silty sand (Possible Fill)	
	12-20	Clay	

The samples selected for laboratory analyses were transported to and analyzed by Maryland Spectral Services, Inc., located in Baltimore, Maryland. A copy of the completed Chain-of-Custody Form and the Laboratory Report is included in Appendix A.

As previously reported, six soil samples were selected for laboratory analysis. All six soil samples were laboratory analyzed for Total Petroleum Hydrocarbons – Diesel Range Organics (TPH-DRO) via EPA Method 8015, Total Petroleum Hydrocarbons – Gasoline Range Organics (TPH-GRO) via EPA Method 8015, Volatile Organic Compounds (VOCs) via EPA Method 8260, Semi-Volatile Organic Compounds (SVOCs) via EPA Method 8270D, Priority Pollutant Heavy Metals by EPA Method 6020, hexavalent chromium via EPA Method 7199, Total Cyanide via EPA Method 9014, Polychlorinated Biphenyl's (PCBs) via EPA Method 8082A, Dioxins & Furans via EPA Method 1613B, and full Toxicity Characteristic Leaching Procedure (TCLP) including VOCs, SVOCs, Chlorinated Pesticides, Chlorinated Herbicides, and Priority Pollutant Metals.

The laboratory results are summarized in the Soil Laboratory Results Table (LRT) included in Appendix C of this report. As indicated in the table, TPH-GRO, PCBs, and TCLP SVOCs, TCLP VOCs, TCLP Pesticides, and TCLP Herbicides were not detected in any of the six soil samples at concentrations above the laboratory's practical quantitation limit.

For comparative purposes only, HCCS compared concentrations of constituents detected with the EPA Regional Screening Levels (RSLs) for residential properties. Also included in the LRT, are the RSLs for industrial properties. In addition, where a RSL is not presented, HCCS utilized District of Columbia Municipal Regulations (DCMR) Title 20 Section 6208 (i.e., Tier 0 Standards). It should be noted that HCCS is including the industrial RSL/Tier 0 Standards for reference only and these standards are not discussed in the text of this report.

As summarized in the LRT and below, the laboratory analysis revealed the presence of TPH-DRO, certain Priority Pollutant Metals, certain TCLP Metals, a SVOC, Total Cyanide, and Dioxins and Furans in one or more of the samples analyzed.

Priority Pollutant Metals

As indicated in the LRT, certain metals were detected within each of the six samples. With the exception of arsenic and hexavalent chromium, each of the concentrations detected were below the Standards presented.

Arsenic

With regard to arsenic, with the exception of P-2, the concentrations of arsenic revealed in probes (i.e., P-3 through P-7) exceeded the Residential RSL of 100 parts per million (ppm).

With further regard to arsenic, HCCS compared the concentrations of arsenic detected with Maryland's Anticipated Typical Concentrations (ATCs, or "naturally-occurring" concentrations of metals in soils) that are presented in the MDE's Cleanup Standards for Soil and Groundwater (June 2008), hereafter referred to as the MDE Cleanup Standard Guidance Document. The ATCs were developed from ten years of investigations at properties around the state of Maryland and indicate typical levels of metals that naturally occur in soils. The MDE Cleanup Standard Guidance Document presents ATCs for three regions across Maryland (i.e., Western Maryland, Central Maryland and Eastern Maryland). When compared with the location of the three regions, the Site's location in the eastern portion of Washington D.C. appears to correlate with the Eastern Maryland Region. Therefore, based on the location of the Site (i.e. Southeast, Washington D.C.), HCCS utilized the ATCs reported in the Eastern Maryland region for comparative purposes.

In addition to the ATCs listed above, HCCS included the reference levels of the United States Geologic Survey (USGS) background metal concentrations in native soil for the Conterminous United States. According to the MDE Cleanup Standard Guidance Document, "comparison of the reference levels to the background metal concentrations... indicates a good correlation exists between the data sets" (i.e., the MDE's data sets to calculate the ATC's and the USGS data sets to calculate background levels).

The ATC for arsenic in the Eastern Maryland region is 3.6 parts per million (ppm). The ATC for arsenic in the Eastern Region is calculated based on the results of 76 soil samples with arsenic concentrations ranging between 0.12 ppm and 6.9 ppm.

- The arsenic concentrations in P-5, P-6, and P-7 (i.e., 2.54, 3.13, and 2.19 ppm, respectively) did not exceed the ATC for arsenic in Eastern Maryland (3.6 ppm).
- The arsenic concentrations in P-3 and P-4 (3.73 ppm, 4.2 ppm) did not exceed the background level (4.8 ppm) for arsenic in soils in the Eastern Portion of the United States, according to the USGS. In addition, the concentrations did not exceed the maximum concentration of arsenic (i.e., 6.9 ppm) utilized by the MDE to calculate the ATC for arsenic in Eastern Maryland.

Hexavalent Chromium

With regard to hexavalent chromium, hexavalent chromium was detected in P-2 at a concentration of 4.34 ppm. This concentration is greater than the Residential RSL (i.e., 0.3 ppm).

TCLP Metals

As indicated in the LRT, TCLP for Barium and Lead were detected in P-3. TCLP Metals were not detected at concentrations above the laboratory's practical quantitation limit in any of the other probes. The concentrations detected in P-3 (i.e., 0.731 ppm for barium and 1.46 ppm for lead) are less than the Residential RSLs (i.e., 100,000 ppm and 5.0 ppm, respectively).

TPH-DRO

As indicated in the LRT, TPH-DRO was detected in P-3 and P-4. TPH-DRO was not detected at concentrations above the laboratory's practical quantitation limit in any of the other probes. The concentrations detected in P-3 (i.e., 101 ppm) and P-4 (i.e., 1,390 ppm) are higher than the Residential RSL (i.e., 100 ppm).

SVOCs

As indicated in the LRT, the SVOC – Bis (2-ethylhexyl) phthalate was detected in P-3. Additional SVOCs were not detected at concentrations above the laboratory's practical quantitation limit in any of the other probes. The concentration of Bis (2-ethylhexyl) phthalate detected in P-3 (i.e., 0.321 ppm) is less than the Residential RSL (i.e., 39.0 ppm).

Total Cyanide

As indicated in the LRT, cyanide was detected in P-6. Cyanide was not detected at concentrations above the laboratory's practical quantitation limit in any of the other probes. The concentration of cyanide detected in P-6 (i.e., 0.42 ppm) is less than the Residential RSL (i.e., 23.0 ppm).

Dioxins and Furans

As indicated in the LRT, at least one dioxin and/or furan were detected within each of the six samples. With the exception of P-3 and P-4, each of the dioxins concentrations detected are below the Standards presented (that is, where a standard is presented). Each of the furans concentrations detected are below the Standards presented.

With regard to P-3 and P-4, the dioxin 2378-TCDD was detected in P-3 at a concentration of 14.0 ppm which exceeds the Residential RSL of 4.8 ppm; the dioxin Total HxCDD was detected in P-3 and P-4 at concentrations of 510 ppm and 260 ppm, respectively, which exceeds the Residential RSL of 100 ppm.

5.0 SUB-SURFACE SOIL GAS SAMPLING PROGRAM

The sub-surface soil gas sampling took place on October 25, 2018. As previously reported, sub-surface soil gas samples were collected from two on-site locations. The sub-surface soil gas samples are identified as G-1 and G-2. Both soil gas probes were located within the proposed building location. The sampling methodology has been described in Section 2.0 of this report.

The soil gas samples collected for laboratory analysis were transported to and analyzed by Maryland Spectral Services located in Baltimore, Maryland. A copy of the completed Chain-of-Custody Form and the Laboratory Report is attached to this letter report.

The two soil gas samples collected for this project were analyzed for Volatile Organic Compounds (VOCs) via TO-15 methodology. The laboratory results for the soil gas samples are provided in the below.

Table 2 – Sub-Surface Soil Gas Sample Results – VOCs
Results and Standards are presented in micrograms per cubic meter (ug/m³)

	SG-1	SG-2	EPAs RSL		RSL “Adjusted” for Attenuation	
			CTR	NHI	CTR	NHI
VOCs						
Benzene	2.3 J	2.3 J	0.36	3.1	12	103.3
Carbon disulfide	20.3	6.85	NS	73	NS	2.4 x 10 ³
Chloromethane	0.83 J	0.91 J	NS	9.4	NS	313.3
Cyclohexane	115	9.09	NS	630	NS	2.1 x 10 ⁴
n-Heptane	115	3.61	NS	42	NS	1.4 x 10 ³
2-Hexanone	90.1	115	NS	3.1	NS	103.3
Methyl ethyl ketone (2-Butanone)	1460 E	1630 E	NS	520	NS	1.7 x 10 ⁴
Toluene	3.92	3.17	NS	520	NS	1.7 x 10 ⁴
Trichloroethene	1.29 J	ND	NS	NS	NS	NS
2,2,4-Trimethylpentane	247	389	NS	100	NS	3.3 x 10 ³
Vinyl chloride	1.12 J	0.51 J	0.17	10	5.67	333.3
Remaining VOCs	ND	ND	Varies		Varies	

EPAs RSL = EPAs Regional Screening Level Resident Ambient Air Table (2017).

RSL Adjusted for Attenuation is the RSL divided by 0.03. According to the June 2015 "Technical Guide for Assessing and Mitigation the Vapor Intrusion Pathway from Subsurface Vapor Sources to Indoor Air" published by the EPA's Office of Solid Waste and Emergency Response, 0.03 is the "Attenuation Factor" (AF) recommended by the EPA to calculate estimated concentrations of VOCs in ambient air based on the VOC concentration obtained from a sub-surface soil gas sample.

CTR = Carcinogenic Target Risk

NHI = Noncancer Hazard Index

ND = Not detected at a concentration greater than or equal to the laboratory practical quantitation limit.

NS = No Screening Level exists for the constituent in the Standard utilized.

J = Detected but below reporting limit; therefore result is an estimated concentration.

E = The concentration indicated for this analyte is an estimated value above the calibration range of the instrument. This value is considered an estimate.

The EPA's Regional Screening Level (RSL) Resident Ambient Air Table was utilized for comparison purposes only. As seen in Table 2, the EPA's RSL for Carcinogenic Target Risk (CTR) and the Noncancer Hazard Index (NHI) are provided. Additionally, The RSLs adjusted for Attenuation Factor (AF) of 0.03 are presented for both CTR and NHI, where applicable.

It is reasonable to apply an attenuation factor when interpreting sub-surface gas data due to the expectation that VOC concentrations in the sub-surface environment would decrease (i.e., attenuate) if the VOC migrates from the sub-surface environment into the ambient air.

As seen above, a total of 11 VOCs were detected in one or both of the sub-surface soil gas samples analyzed. They are discussed as follows:

- RSLs are not presented for one of the VOCs detected (i.e., trichloroethene); however, the concentration detected could only be estimated by the laboratory and is therefore considered extremely minimal.
- For four of the VOCs detected (i.e., carbon disulfide, chloromethane, cyclohexane, and toluene), the concentrations detected in the sub-surface soil gas samples do not exceed the RSLs (and also do not exceed the RSLs adjusted for attenuation) for each of the respective VOCs.
- For five of the VOCs detected (i.e., benzene, n-heptane, Methyl ethyl ketone, 2,2,4-trimethylpentane, and vinyl chloride), the concentrations of these VOCs in one or both of the sub-surface soil gas samples exceed the RSLs; however, the concentrations do not exceed the RSLs adjusted for attenuation.
- With regard to the remaining VOC detected in both sub-surface soil gas samples (i.e., 2-hexanone), the concentrations exceed the RSL. However, only one of the sub-surface soil gas samples (i.e., G-2) exceed the RSL adjusted for attenuation, specifically the adjusted RSL for Noncancer Hazard Index. It can be noted that this concentration of 2-hexanone (i.e., 115 ug/m³) only slightly exceeded the adjusted RSL for Noncancer Hazard Index (i.e., 103.3 ug/m³).

6.0 SUMMARY

HCCS has completed the Phase II ESA at the property located at Sycamore Street, SE - Washington, D.C. 20032. Specifically, a Geophysical Survey (i.e., a GPR and an EM Survey) was initially conducted. Based on the results of the Geophysical Survey, a UST did not appear to be located within the areas tested. Subsequent to the Geophysical Survey, seven (7) probes were advanced throughout the Site. At each of the locations, the soils were inspected for evidence of environmental impact (e.g., staining, odors, elevated PID readings, etc.). Six (6) soil samples were submitted to a laboratory for environmental analyses. In addition, two (2) additional locations were selected in the area of the proposed building footprint and sub-surface soil gas was collected via the use of Summa Canisters.

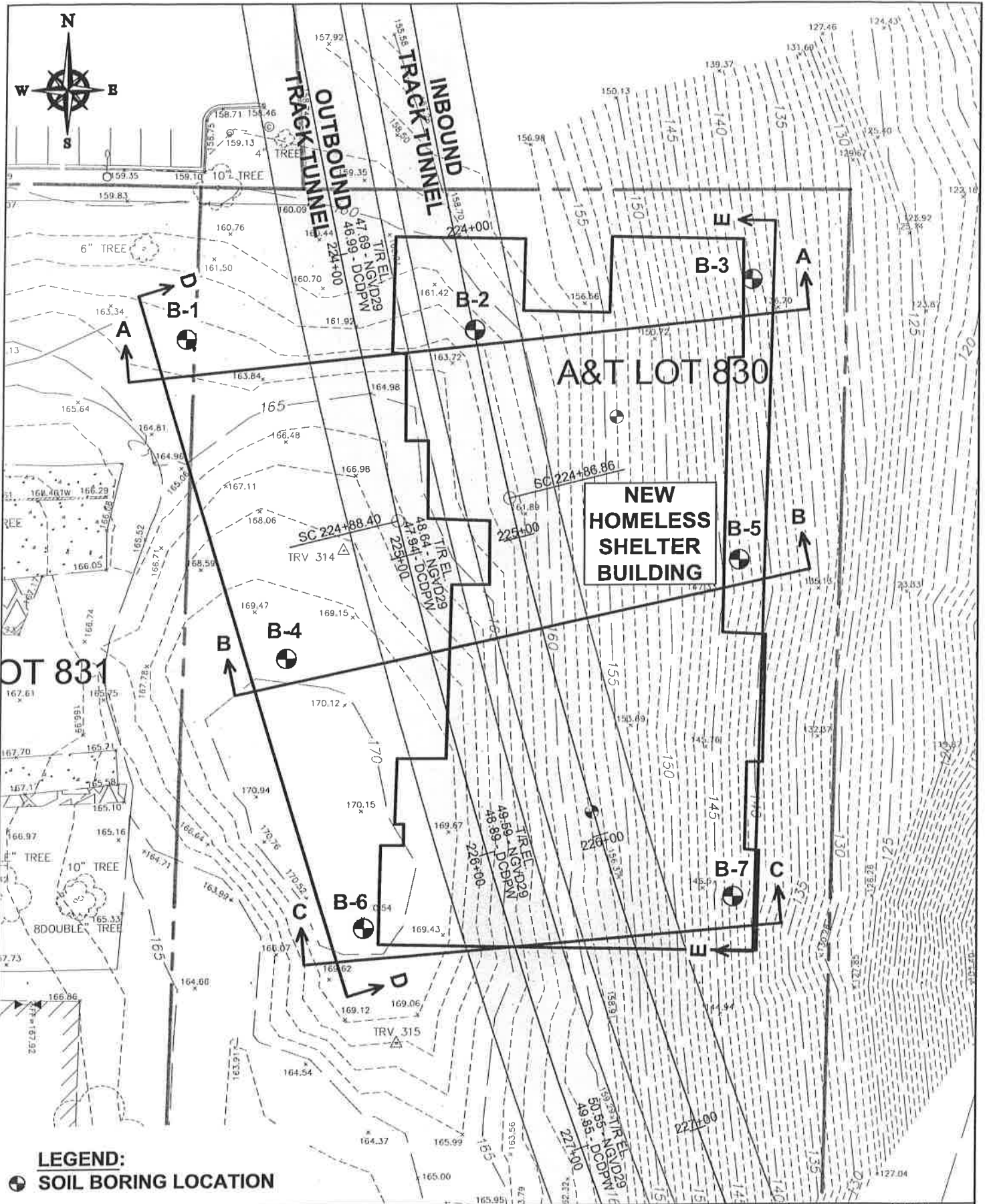
Saturated soils and/or groundwater were not encountered at the depths of the probes. Therefore, groundwater samples could not be collected as part of this assessment.

Evidence of impacted soils was not apparent during the probing activity (i.e., no odors or staining were observed). However, a relatively small layer of black silty sand was observed in most of the probes. In addition, PID readings were not detected in the soil intervals screened during the probing activity. Further, laboratory analyses of the soil samples did not reveal the presence of TPH-GRO, PCBs, and TCLP SVOCs, VOCs, TCLP VOCs, TCLP pesticides, and TCLP herbicides at concentrations exceeding the laboratory's practical quantitation limit. However, certain Priority Pollutant Metals including Hexavalent Chromium, certain TCLP Metals, certain SVOCs, Total Cyanide, and Dioxins and Furans were detected in one or more of the soil samples analyzed. With the exception of Hexavalent Chromium, TPH-DRO, and certain Dioxins, the concentrations detected were below the screening level standards utilized (as reported in Section 4.0). The concentrations of Hexavalent Chromium in P-2, TPH-DRO in P-3 and P-4, and certain Dioxins in P-3 and P-4 were above the screening level standards utilized (as reported in Section 4.0).

Based on the findings of the Phase II ESA with regard to the soil encountered, sampled, and laboratory analyzed, elevated concentrations of certain constituents were generally detected in probes P-2 through P-4; however, evidence of significant widespread contamination in the soil at the Site was not revealed in the remaining areas investigated (i.e., P-5 through P-7).

With regard to the sub-surface soil gas samples collected at the Site, certain VOCs were detected (as detailed in Section 5.0) and based on the urban nature of the Site and vicinity, the presence of VOCs in the sub-surface gas environment is not unexpected. It is HCCS's opinion that the Client should consider the installation of engineering controls in association with the construction of the future on-site building to mitigate the migration of VOCs in the subsurface into the ambient air of the future building. Such engineering controls could include the installation of a vapor barrier in the subsurface and the installation of a sub-surface depressurization/venting system.

Attachment 4: Excerpts of 2018 Geotechnical Report



LEGEND:

⊙ SOIL BORING LOCATION

HILLIS-CARNES
ENGINEERING ASSOCIATES
 10975 Guilford Road, Suite A Annapolis Junction, Maryland
 Ph: (410) 880-4788 WWW.HCEA.COM Fax: (410) 880-4088

BORING LOCATION PLAN
ST. ELIZABETH'S SHELTER RELOCATION
 WASHINGTON, DC

PROJECT NO:	18344A	DESIGN BY:	NP
DATE:	11/30/18	DRAWN BY:	AM
SCALE:	1" = 40'	CHECKED BY:	MPJ
SHEET:	1		

Refer to the Records of Soil Exploration in the Appendix of this report for more detailed information regarding the specific soil conditions encountered in the individual borings.

4.4 Groundwater

Groundwater levels were monitored during drilling operations. Groundwater was encountered at depths ranging from 30± ft to 71± ft below the existing ground surface during and following drilling operations. Generally, these depths coincide with elevations ranging from El 92.6± to El 113.5±. An exception to this occurred in Boring B-1 where groundwater was encountered at completion at El 145± (the borehole was dry to a cave-in depth of 32.3±, or approximately El 131.8±, after 24 hours). The water encountered at completion appears to be water that may have been perched in the gravel layer above a clay layer in the boring.

It should also be anticipated that perched water may be encountered in pockets within the fill materials, at the fill material/natural soil interface or over denser or more fine-grained layers.

A more accurate determination of the hydrostatic water table would require the installation of perforated pipes or piezometers which could be monitored over an extended period of time. The actual level of the hydrostatic water table and the amount and level of perched water should be anticipated to fluctuate throughout the year, depending on variations in precipitation, surface run-off, infiltration, site topography, and drainage.

5.0 PRELIMINARY EVALUATIONS AND RECOMMENDATIONS

Our preliminary findings suggest that the development of the site as currently proposed would require difficult foundation design and construction and would place a significant amount of risk on the Owner. There are subsurface conditions at the site that make foundation design and installation difficult, at best. The two most problematic subsurface conditions deal with the presence of deep existing man-placed fill materials that are not suitable for foundation support and the presence of the WMATA Green Line tunnels below. The deeper fill materials encountered along the slope on the eastern side of the proposed building area (as well as being located adjacent to the Green Line tunnel) also limit the degree of reliability that would be considered present for any deep foundation alternative selected.

In installing a deep foundation system, tip elevations are limited by the presence of the existing man-placed fill materials as well as the presence of the Green Line tunnel. Along the eastern side of the structure, there is a small window of suitable natural soil that is located between the bottom of the unsuitable fill materials and a point where the installation of the piles would be located too close to the existing tunnels, potentially placing loads on the tunnels greater than allowable.

We understand that it is possible that the proposed building footprint could be rotated and/or otherwise moved. We recommend that serious consideration be given to moving the building footprint as far to the west as is possible on the site - away from the slope and deeper man-placed fill materials. It may be possible for the relocated structure to be supported on a spread footing foundation system (considering the same finished floor elevation) if it can be moved far enough to the west. If this movement of the structure could occur (additional subsurface exploration would be required to evaluate this possibility), it would possibly allow the spread footing foundations to bear on firm, natural soils or on new engineered fill. This has a multiple effect on the viability and reliability of the structure. It would reduce the unknowns of the subsurface conditions, would reduce the cost of the foundation system and would lower the impact of the structure on the Green Line tunnels that are located 84± ft to 86± ft below the proposed finished floor elevation.

The following preliminary recommendations have been developed on the basis of the previously described project characteristics and subsurface conditions and on the discussion of foundation risks described above. If there are any changes to the project characteristics or if different subsurface conditions are encountered during construction, HCCS should be consulted so that the recommendations of this report can be reviewed and revised, if necessary.

5.1 General Site Preparation

All existing structures (including all above and below ground construction) within the areas to be developed should be removed prior to the initiation of new construction. We suggest that all available information regarding the existing utilities at the site be reviewed prior to construction.

Removal should include all underground pipes, utilities, and underground structures that might interfere with the new construction. If abandoned underground utilities are to be removed prior to the initiation of construction, provisions should be made in the construction specifications and budget to restore the subgrade to stable condition. Restoration should include backfilling and compaction of the excavation areas.

Removal should also include surficial topsoil, unsuitable existing fill and deleterious materials from the areas to be developed. Stripping operations should be performed in a manner consistent with good erosion and sediment control practices.

After the initial stripping process is completed, areas of the site to receive fill, or areas of the site at-grade where structures will be located, should be proofrolled. The proofrolling operations should be performed using a 20-ton, fully-loaded dump truck or another pneumatic-tire vehicle of similar size and weight. The purpose of the proofrolling will be to locate any near-surface

If imported fill material is required, those materials should have Unified Soil Classifications of SM or more granular.

The fine-grained nature of some the soils encountered on-site may make them sensitive to heavy dynamic loads and to increases in moisture content beyond their "optimum" value. The traffic of heavy equipment, including heavy construction equipment, could create pumping and a general deterioration of the on-site soils, especially if conducted in the presence of water. If exposed to water, these soils can deteriorate and become difficult to work or compact properly. The grading should therefore, if at all possible, be carried out during a dry season. This would help to minimize these potential problems. Additionally, the contractor should not permit water to pond on the site. Exposed subgrades should be sloped and sealed at all times to facilitate rainfall runoff. If such problems arise, the Geotechnical Engineer should be consulted for an evaluation of the conditions.

New fill slopes should be properly benched into existing slopes (and made with a slope of 2(H):1(V) or more flat.

5.5 Foundations

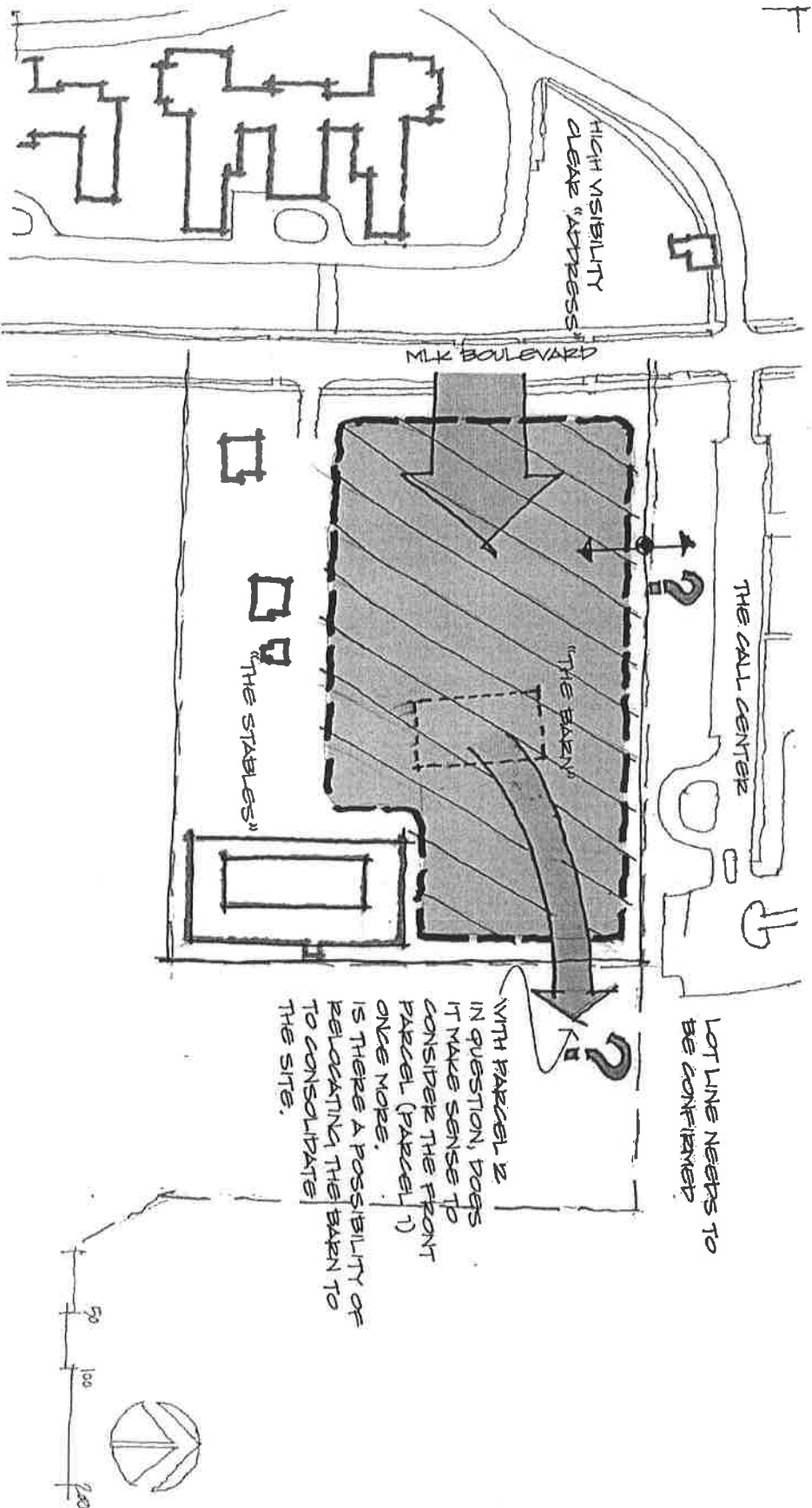
As stated previously, deep existing man-placed fill materials that are not suitable for foundation support would require the building, in its current configuration and location, to be supported on a deep foundation system. Based on the results of the borings, there is a small window of suitable natural soil that is located between the bottom of the unsuitable fill materials and a point where the installation of the piles would be located too close to the existing tunnels, particularly on the eastern side of the proposed structure. It is recommended that additional borings, including borings directly over the tunnels, be drilled to better delineate the limits of the deeper fill materials to reduce the risk of having foundations end up bearing on existing fill materials.

Additional evaluation will also be required once the proposed foundation scheme has been developed. It is not possible to thoroughly evaluate the impacts that a deep foundation system may have on the existing Green Line tunnels as required by WMATA without knowing the foundation configurations so that group effects can be analyzed.

Evaluations pertaining to the potential use of shallow, spread footing foundations for a relocated structure would also require additional borings within the new building footprint. Such evaluations are beyond the scope of this report.

Attachment 5: Excerpts of General Site Assessment

ZONING REQUIREMENTS with respect to Parcel 1 are intended to limit the density of development around the historic assets ("The Barn" and "The Stables") that exist there. Parcel 1 has a maximum allowable height of 25 feet, and a Floor Area Ratio (FAR) of .25. Since presently there are neither maximum height nor site area restrictions for Parcel 2, this site was selected as the potential location for the Shelter.



PARCEL 1 WAS INITIALLY THOUGHT TO BE A POTENTIAL SITE FOR THE NEW SHELTER. Relocation of "The Barn" was also considered in order to provide a larger area for building placement on this site.

