APPENDIX L

Wetland Data Sheets

LEGEND:

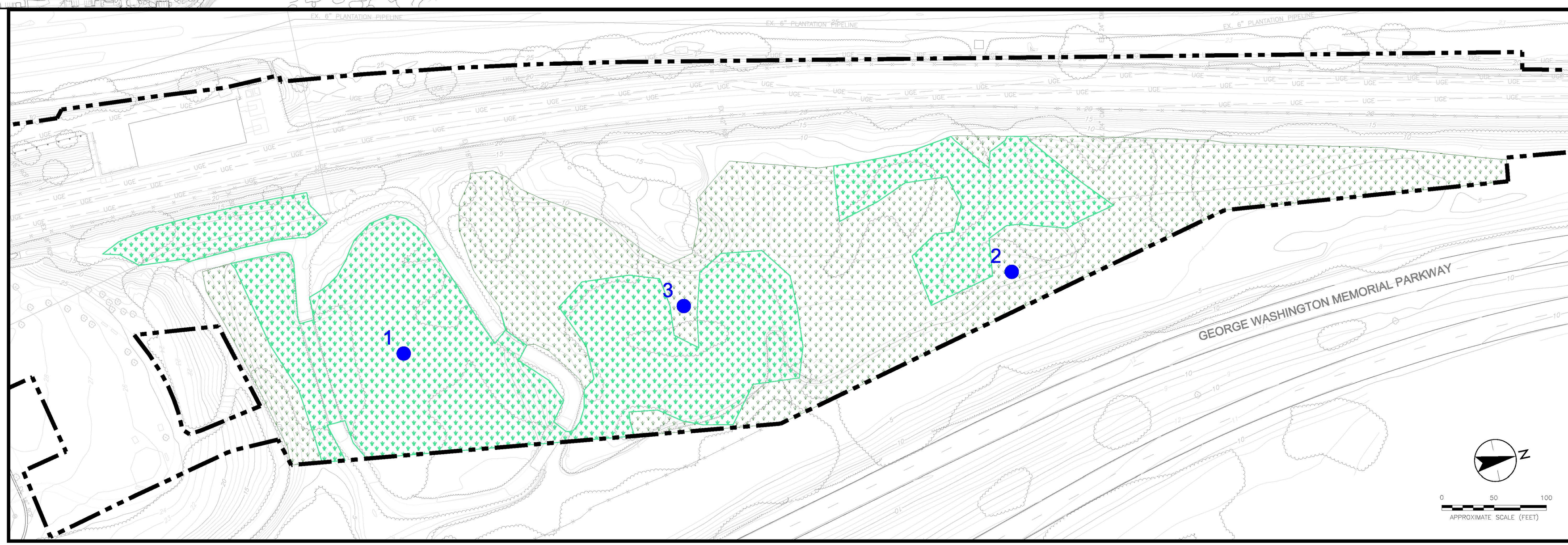
- APPROXIMATE FORESTED WETLAND (PFO) LIMITS
- APPROXIMATE EMERGENT WETLAND (PEM) LIMITS
- PROJECT LIMITS
- 1 DATA POINT

SITE DATA:

PROJECT AREA	16.89 ACRES ±
PFO WETLANDS	2.27 ACRES ±
PEM WETLANDS	2.16 ACRES ±

NOTES:

1. COORDINATE SYSTEM WMATA 2009
2. TOPOGRAPHY PROVIDED BY WMATA
3. THE LIMITS OF WETLANDS AND OTHER WATERS OF THE U.S. SHOWN ON THIS MAP HAVE BEEN PROVIDED BY WMATA.



INSET

Stantec 150 Riverside Parkway, Suite 301 Fredericksburg, VA 22406 PHONE:(540) 785-5544 FAX:(540) 785-1742	FOR: CITY OF ALEXANDRIA, VIRGINIA		POTOMAC YARD METRO STATION DATA POINT LOCATION MAP	FIGURE: 1
	JOB NUMBER: 203401233	DRAWN BY: REC	CHECKED BY: LC	APPROVED BY: LC	DATE: JANUARY 4, 2019

FILEPATH:T:\203401233\03_data\gis_cad\cad\01233n_delin_map_20190102.dwg\rscole\Jan 15, 2019 at 17:08\Layout: DATA POINT

Wetland Determination Data Form - Atlantic and Gulf Coastal Plain Region

Sampling Point Number: 1

Project:	COA POTOMAC YARDS METRO		
Applicant:	CITY OF ALEXANDRIA	Section/Township/Range:	N/A
City/County:	CITY OF ALEXANDRIA	Subregion (LRR or MLRA):	LRR P
State:	VIRGINIA	Site Latitude:	38.832838º
Investigator(s):	B. YOUNG & J. MANN	Site Longitude:	-77.045898º
Date:	11/28/2018	Soil Map Unit Name:	GRIST MILL SANDY LOAM

Summary of Findings: **EMERGENT WETLAND INSIDE PEDESTRIAN TRAIL WITHIN BUILD ALTERNATIVE B;**

Hydrophytic Vegetation is Present:	X	Normal Circumstances:	X	NWI Classification:	PEM
Hydric Soils are Present:	X	Disturbed Parameters (see Remarks):		Local Relief:	CONCAVE
Wetland Hydrology is Present:	X	Problematic Parameters (see Remarks):		Landform:	FLAT
Sampled Area is within a Wetland:	X	Atypical Climate/Hydrology (see Remarks):		Slope %:	0-1

Hydrology Parameter:

Primary Indicators:

- ___ Surface Water (A1)
- X High Water Table (A2)
- X Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Water Stained Leaves (B9)
- ___ Aquatic Fauna (B13)
- ___ Marl Deposits (B15)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres on Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Other

Secondary Indicators:

- ___ Surface Soil Cracks (B6)
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Drainage Patterns (B10)
- ___ Moss Trim Lines (B16)
- ___ Dry-Season Water Table (C2)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Stunted or Stressed Plants (D1)
- ___ Geomorphic Position (D2)
- ___ Shallow Aquitard (D3)
- X FAC-Neutral Test (D5)
- ___ Sphagnum Moss (D8)

Water Depths (inches):
Surface Water: ___
Water Table: 1
Saturated soil: 1

Remarks: **HYDROLOGY PARAMETER MET.**

Vegetation Parameter:

Dominant Species	Stratum	IND	%
Platanus occidentalis	Sapling	FACW	15
Platanus occidentalis	Shrub	FACW	5
Juniperus virginiana	Shrub	FACU	3
Persicaria pensylvanica	Herbaceous	FACW	15
Dulichium arundinaceum	Herbaceous	OBL	10
Phragmites australis	Herbaceous	FACW	10
Ampelopsis brevipedunculata	Vine	NI	25

Non-Dominant Species	Stratum	IND	%
Solidago rugosa	Herbaceous	FAC	3

% Dominant species FAC or wetter: 83%

NOTE: SPECIES INDICATOR STATUS ACCORDING TO 2016 NATIONAL WETLAND PLANT LIST

Prevalence Index: 2.0

Calculated using all species present.

Rapid Test for Hydrophytic Vegetation: ___
Dominance Test >50%: X
Prevalence Index is ≤ 3.0: X
Problematic Hydrophytic Vegetation: ___

Remarks: **VEGETATION PARAMETER MET.**

Soil Parameter:

	Matrix		Redox Features				
Depth (inches)	**Color (Moist)**	**%**	**Color (Moist)**	**%**	**Type**	**Loc**	**Texture**
0-3	10YR 4/1	85	10YR 6/8	15	C	M	SANDY LOAM
3-20	2.5Y 4/1	90	10YR 6/8	10	C	M	SANDY CLAY LOAM

Hydric Soil Indicators:

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5)
- ___ Organic Bodies (A6)
- ___ 5cm Mucky Mineral (A7)
- ___ Muck Presence (A8)
- ___ 1 cm Muck (A9)
- ___ Depleted Below Dark Surface (A
- ___ Thick Dark Surface (A12)
- ___ Coast Prairie Redox (A16)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Dark Surface (S7)
- ___ Polyvalue Below Surface (S8)
- ___ Thin Dark Surface (S9)
- ___ Loamy Mucky Mineral (F1)
- ___ Loamy Gleyed Matrix (F2)
- X Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- ___ Marl (F10)
- ___ Depleted Ochric (F11)
- ___ Iron-Manganese Masses (F12)
- ___ Umbric Surface (F13)
- ___ Delta Ochric (F17)
- ___ Reduced Vertic (F18)
- ___ Piedmont Floodplain Soils (F19)
- ___ Anomalous Bright Loamy Soils (F20)

Indicators for Problematic Hydric Soils

- ___ 1cm Muck (A9)
- ___ 2cm Muck (A10)
- ___ Reduced Vertic (F18)
- ___ Piedmont Floodplain Soils (F19)
- ___ Anomalous Bright Loamy Soils (F20)
- ___ Red Parent Material (TF2)
- ___ Very Shallow Dark Surface (TF12)
- ___ Other

Restrictive Layer (If Observed)
Type: ___
Depth (inches): ___

Remarks: **SOIL PARAMETER MET.**

Wetland Determination Data Form - Atlantic and Gulf Coastal Plain Region

Sampling Point Number: 2

Project:	COA POTOMAC YARDS METRO		
Applicant:	CITY OF ALEXANDRIA	Section/Township/Range:	N/A
City/County:	CITY OF ALEXANDRIA	Subregion (LRR or MLRA):	LRR P
State:	VIRGINIA	Site Latitude:	38.832838º
Investigator(s):	B. YOUNG & J. MANN	Site Longitude:	-77.045898º
Date:	11/28/2018	Soil Map Unit Name:	GRIST MILL SANDY LOAM

Summary of Findings: **FORESTED WETLAND IN NORTHERN PORTION OF BUILD ALTERNATIVE B;**

Hydrophytic Vegetation is Present:	X	Normal Circumstances:	X	NWI Classification:	PFO
Hydric Soils are Present:	X	Disturbed Parameters (see Remarks):		Local Relief:	CONCAVE
Wetland Hydrology is Present:	X	Problematic Parameters (see Remarks):		Landform:	FLAT
Sampled Area is within a Wetland:	X	Atypical Climate/Hydrology (see Remarks):		Slope %:	0-1

Hydrology Parameter:

Primary Indicators:		*Secondary Indicators:*
X Surface Water (A1)	Water Stained Leaves (B9)	Surface Soil Cracks (B6)
High Water Table (A2)	Aquatic Fauna (B13)	Sparsely Vegetated Concave Surface (B8)
X Saturation (A3)	Marl Deposits (B15)	Drainage Patterns (B10)
Water Marks (B1)	Hydrogen Sulfide Odor (C1)	Moss Trim Lines (B16)
Sediment Deposits (B2)	Oxidized Rhizospheres on Living Roots (C3)	Dry-Season Water Table (C2)
Drift Deposits (B3)	Presence of Reduced Iron (C4)	Crayfish Burrows (C8)
Algal Mat or Crust (B4)	Recent Iron Reduction in Tilled Soils (C6)	Saturation Visible on Aerial Imagery (C9)
Iron Deposits (B5)	Thin Muck Surface (C7)	Stunted or Stressed Plants (D1)
Inundation Visible on Aerial Imagery (B7)	Other	Geomorphic Position (D2)
		Shallow Aquitard (D3)
		X FAC-Neutral Test (D5)
		Sphagnum Moss (D8)

Water Depths (inches):
Surface Water: 1
Water Table:
Saturated soil: 1

Remarks: **HYDROLOGY PARAMETER MET.**

Vegetation Parameter:

Dominant Species	Stratum	IND	%
Acer rubrum	Tree	FAC	45
Acer rubrum	Sapling	FAC	15
Betula nigra	Sapling	FACW	5
Symphyotrichum pilosum	Herbaceous	FAC	5
Boehmeria cylindrica	Herbaceous	FACW	3
Lonicera japonica	Vine	FACU	5
Toxicodendron radicans	Vine	FAC	5

Non-Dominant Species	Stratum	IND	%

% Dominant species FAC or wetter: 86%

Prevalence Index: 3.0

NOTE: SPECIES INDICATOR STATUS ACCORDING TO 2016 NATIONAL WETLAND PLANT LIST

Calculated using all species present.

Rapid Test for Hydrophytic Vegetation:
Dominance Test >50%: X
Prevalence Index is ≤ 3.0: X
Problematic Hydrophytic Vegetation:

Remarks: **VEGETATION PARAMETER MET.**

Soil Parameter:

	Matrix		Redox Features				
Depth (inches)	**Color (Moist)**	**%**	**Color (Moist)**	**%**	**Type**	**Loc**	**Texture**
0-8	7.5YR 4/1	80	7.5YR 5/8	20	C	M	SILTY CLAY LOAM
8-20	7.5YR 5/2	60	7.5YR 5/8	40	C	M	SILTY CLAY LOAM

Hydric Soil Indicators:

Histosol (A1)	Coast Prairie Redox (A16)	Redox Dark Surface (F6)	*Indicators for Problematic Hydric Soils*
Histic Epipedon (A2)	Sandy Mucky Mineral (S1)	Depleted Dark Surface (F7)	
Black Histic (A3)	Sandy Gleyed Matrix (S4)	Redox Depressions (F8)	1cm Muck (A9)
Hydrogen Sulfide (A4)	Sandy Redox (S5)	Marl (F10)	2cm Muck (A10)
Stratified Layers (A5)	Stripped Matrix (S6)	Depleted Ochric (F11)	Reduced Vertic (F18)
Organic Bodies (A6)	Dark Surface (S7)	Iron-Manganese Masses (F12)	Piedmont Floodplain Soils (F19)
5cm Mucky Mineral (A7)	Polyvalue Below Surface (S8)	Umbric Surface (F13)	Anomalous Bright Loamy Soils (F20)
Muck Presence (A8)	Thin Dark Surface (S9)	Delta Ochric (F17)	Red Parent Material (TF2)
1 cm Muck (A9)	Loamy Mucky Mineral (F1)	Reduced Vertic (F18)	Very Shallow Dark Surface (TF12)
Depleted Below Dark Surface (A	Loamy Gleyed Matrix (F2)	Piedmont Floodplain Soils (F19)	Other
Thick Dark Surface (A12)	X Depleted Matrix (F3)	Anomalous Bright Loamy Soils (F20)	

Restrictive Layer (If Observed)
Type:
Depth (inches):

Remarks: **SOIL PARAMETER MET.**

Wetland Determination Data Form - Atlantic and Gulf Coastal Plain Region

Sampling Point Number: 3

Project:	COA POTOMAC YARDS METRO		
Applicant:	CITY OF ALEXANDRIA	Section/Township/Range:	N/A
City/County:	CITY OF ALEXANDRIA	Subregion (LRR or MLRA):	LRR P
State:	VIRGINIA	Site Latitude:	38.832838º
Investigator(s):	B. YOUNG & J. MANN	Site Longitude:	-77.045898º
Date:	11/28/2018	Soil Map Unit Name:	GRIST MILL SANDY LOAM

Summary of Findings: **DISTURBED AREA IN CENTRAL PORTION OF BUILD ALTERNATIVE B;**

Hydrophytic Vegetation is Present:	X	Normal Circumstances:	X	NWI Classification:	PFO
Hydric Soils are Present:	X	Disturbed Parameters (see Remarks):		Local Relief:	NONE
Wetland Hydrology is Present:		Problematic Parameters (see Remarks):		Landform:	FLAT
Sampled Area is within a Wetland:		Atypical Climate/Hydrology (see Remarks):		Slope %:	1-3

Hydrology Parameter:

Primary Indicators:		*Secondary Indicators:*
___ Surface Water (A1)	___ Water Stained Leaves (B9)	___ Surface Soil Cracks (B6)
___ High Water Table (A2)	___ Aquatic Fauna (B13)	___ Sparsely Vegetated Concave Surface (B8)
___ Saturation (A3)	___ Marl Deposits (B15)	___ Drainage Patterns (B10)
___ Water Marks (B1)	___ Hydrogen Sulfide Odor (C1)	___ Moss Trim Lines (B16)
___ Sediment Deposits (B2)	___ Oxidized Rhizospheres on Living Roots (C3)	___ Dry-Season Water Table (C2)
___ Drift Deposits (B3)	___ Presence of Reduced Iron (C4)	___ Crayfish Burrows (C8)
___ Algal Mat or Crust (B4)	___ Recent Iron Reduction in Tilled Soils (C6)	___ Saturation Visible on Aerial Imagery (C9)
___ Iron Deposits (B5)	___ Thin Muck Surface (C7)	___ Stunted or Stressed Plants (D1)
___ Inundation Visible on Aerial Imagery (B7)	___ Other	___ Geomorphic Position (D2)
		___ Shallow Aquitard (D3)
		___ FAC-Neutral Test (D5)
		Sphagnum Moss (D8)

Water Depths (inches):
Surface Water: _____
Water Table: _____
Saturated soil:

Remarks: **HYDROLOGY PARAMETER NOT MET.**

Vegetation Parameter:

Dominant Species	Stratum	IND	%
Seteria faberi	Herbaceous	UPL	15
Setaria pumila	Herbaceous	FAC	10
Phragmites australis	Herbaceous	FACW	10
Symphyotrichum pilosum	Herbaceous	FAC	10
Ampelopsis brevipedunculata	Vine	NI	35

Non-Dominant Species	Stratum	IND	%
Rubus argutus	Herbaceous	FAC	5
Plantago major	Herbaceous	FAC	3

% Dominant species FAC or wetter: 75%

Prevalence Index: 3.4

NOTE: SPECIES INDICATOR STATUS ACCORDING TO 2016 NATIONAL WETLAND PLANT LIST

Calculated using all species present.

Rapid Test for Hydrophytic Vegetation: _____
Dominance Test >50%: X
Prevalence Index is ≤ 3.0: _____
Problematic Hydrophytic Vegetation: _____

Remarks: **VEGETATION PARAMETER MET.**

Soil Parameter:

	Matrix		Redox Features				
Depth (inches)	**Color (Moist)**	**%**	**Color (Moist)**	**%**	**Type**	**Loc**	**Texture**
0-2	2.5Y 4/1	100					CLAY LOAM
2-6	5Y 4/1	95	10YR 5/8	5	C	M	SANDY CLAY LOAM
6-20	5Y 4/1	100					SANDY CLAY LOAM

Hydric Soil Indicators:

___ Histosol (A1)	___ Coast Prairie Redox (A16)	___ Redox Dark Surface (F6)	*Indicators for Problematic Hydric Soils*
___ Histic Epipedon (A2)	___ Sandy Mucky Mineral (S1)	___ Depleted Dark Surface (F7)	
___ Black Histic (A3)	___ Sandy Gleyed Matrix (S4)	___ Redox Depressions (F8)	___ 1cm Muck (A9)
___ Hydrogen Sulfide (A4)	___ Sandy Redox (S5)	___ Marl (F10)	___ 2cm Muck (A10)
___ Stratified Layers (A5)	___ Stripped Matrix (S6)	___ Depleted Ochric (F11)	___ Reduced Vertic (F18)
___ Organic Bodies (A6)	___ Dark Surface (S7)	___ Iron-Manganese Masses (F12)	___ Piedmont Floodplain Soils (F19)
___ 5cm Mucky Mineral (A7)	___ Polyvalue Below Surface (S8)	___ Umbric Surface (F13)	___ Anomalous Bright Loamy Soils (F20)
___ Muck Presence (A8)	___ Thin Dark Surface (S9)	___ Delta Ochric (F17)	___ Red Parent Material (TF2)
___ 1 cm Muck (A9)	___ Loamy Mucky Mineral (F1)	___ Reduced Vertic (F18)	___ Very Shallow Dark Surface (TF12)
___ Depleted Below Dark Surface (A	___ Loamy Gleyed Matrix (F2)	___ Piedmont Floodplain Soils (F19)	___ Other
___ Thick Dark Surface (A12)	X Depleted Matrix (F3)	___ Anomalous Bright Loamy Soils (F20)	

Restrictive Layer (If Observed)
Type: _____
Depth (inches):

Remarks: **SOIL PARAMETER MET.**

Wetland Determination Data Form - Atlantic and Gulf Coastal Plain Region

Sampling Point Number: 4

Stantec

Project:	COA POTOMAC YARDS METRO		
Applicant:	CITY OF ALEXANDRIA	Section/Township/Range:	N/A
City/County:	CITY OF ALEXANDRIA	Subregion (LRR or MLRA):	LRR P
State:	VIRGINIA	Site Latitude:	38.832838º
Investigator(s):	B. YOUNG & J. MANN	Site Longitude:	-77.045898º
Date:	11/28/2018	Soil Map Unit Name:	GRIST MILL SANDY LOAM

Summary of Findings: **TIDAL EMERGENT WETLAND SOUTH OF BUILD ALTERNATIVE B AND ADJACENT TO GEORGE WASHINGTON MEMORIAL PARKWAY;**

Hydrophytic Vegetation is Present:	X	Normal Circumstances:	X	NWI Classification:	PEM
Hydric Soils are Present:	X	Disturbed Parameters (see Remarks):		Local Relief:	CONCAVE
Wetland Hydrology is Present:	X	Problematic Parameters (see Remarks):		Landform:	DRAINAGEWAY
Sampled Area is within a Wetland:	X	Atypical Climate/Hydrology (see Remarks):		Slope %:	0-1

Hydrology Parameter:

Primary Indicators:		*Secondary Indicators:*
		Surface Soil Cracks (B6)
Surface Water (A1)	Water Stained Leaves (B9)	Sparsely Vegetated Concave Surface (B8)
X High Water Table (A2)	Aquatic Fauna (B13)	Drainage Patterns (B10)
X Saturation (A3)	Marl Deposits (B15)	Moss Trim Lines (B16)
Water Marks (B1)	Hydrogen Sulfide Odor (C1)	Dry-Season Water Table (C2)
Sediment Deposits (B2)	Oxidized Rhizospheres on Living Roots (C3)	Crayfish Burrows (C8)
Drift Deposits (B3)	Presence of Reduced Iron (C4)	Saturation Visible on Aerial Imagery (C9)
Algal Mat or Crust (B4)	Recent Iron Reduction in Tilled Soils (C6)	Stunted or Stressed Plants (D1)
Iron Deposits (B5)	Thin Muck Surface (C7)	Geomorphic Position (D2)
Inundation Visible on Aerial Imagery (B7)	Other	Shallow Aquitard (D3)
		X FAC-Neutral Test (D5)
		Sphagnum Moss (D8)

Water Depths (inches):
Surface Water:
Water Table: 1
Saturated soil: 1

Remarks: **HYDROLOGY PARAMETER MET.**

Vegetation Parameter:

Dominant Species	Stratum	IND	%
Phragmites australis	Herbaceous	FACW	30
Typha latifolia	Herbaceous	OBL	20

Non-Dominant Species	Stratum	IND	%
Hibiscus moscheutos	Herbaceous	OBL	10
Persicaria sagittata	Herbaceous	OBL	5

% Dominant species FAC or wetter: 100%

Prevalence Index: 1.5

NOTE: SPECIES INDICATOR STATUS ACCORDING TO 2016 NATIONAL WETLAND PLANT LIST

Calculated using all species present.

Rapid Test for Hydrophytic Vegetation: X
Dominance Test >50%: X
Prevalence Index is ≤ 3.0: X
Problematic Hydrophytic Vegetation:

Remarks: **VEGETATION PARAMETER MET.**

Soil Parameter:

	Matrix		Redox Features				
Depth (inches)	**Color (Moist)**	**%**	**Color (Moist)**	**%**	**Type**	**Loc**	**Texture**
0-1	2.5Y 3/1	100					SAPRIC
4-8	2.5Y 5/1	100					SILTY CLAY LOAM
8-20	N 4/0	95	10YR 5/8	5	C	M	SILTY CLAY LOAM

Hydric Soil Indicators:

Histosol (A1)	Coast Prairie Redox (A16)	Redox Dark Surface (F6)	*Indicators for Problematic Hydric Soils*
Histic Epipedon (A2)	Sandy Mucky Mineral (S1)	Depleted Dark Surface (F7)	
Black Histic (A3)	Sandy Gleyed Matrix (S4)	Redox Depressions (F8)	1cm Muck (A9)
Hydrogen Sulfide (A4)	Sandy Redox (S5)	Marl (F10)	2cm Muck (A10)
Stratified Layers (A5)	Stripped Matrix (S6)	Depleted Ochric (F11)	Reduced Vertic (F18)
Organic Bodies (A6)	Dark Surface (S7)	Iron-Manganese Masses (F12)	Piedmont Floodplain Soils (F19)
5cm Mucky Mineral (A7)	Polyvalue Below Surface (S8)	Umbric Surface (F13)	Anomalous Bright Loamy Soils (F20)
Muck Presence (A8)	Thin Dark Surface (S9)	Delta Ochric (F17)	Red Parent Material (TF2)
1 cm Muck (A9)	Loamy Mucky Mineral (F1)	Reduced Vertic (F18)	Very Shallow Dark Surface (TF12)
Depleted Below Dark Surface (A	X Loamy Gleyed Matrix (F2)	Piedmont Floodplain Soils (F19)	Other
Thick Dark Surface (A12)	X Depleted Matrix (F3)	Anomalous Bright Loamy Soils (F20)	

Restrictive Layer (If Observed)
Type:
Depth (inches):

Remarks: **SOIL PARAMETER MET.**