



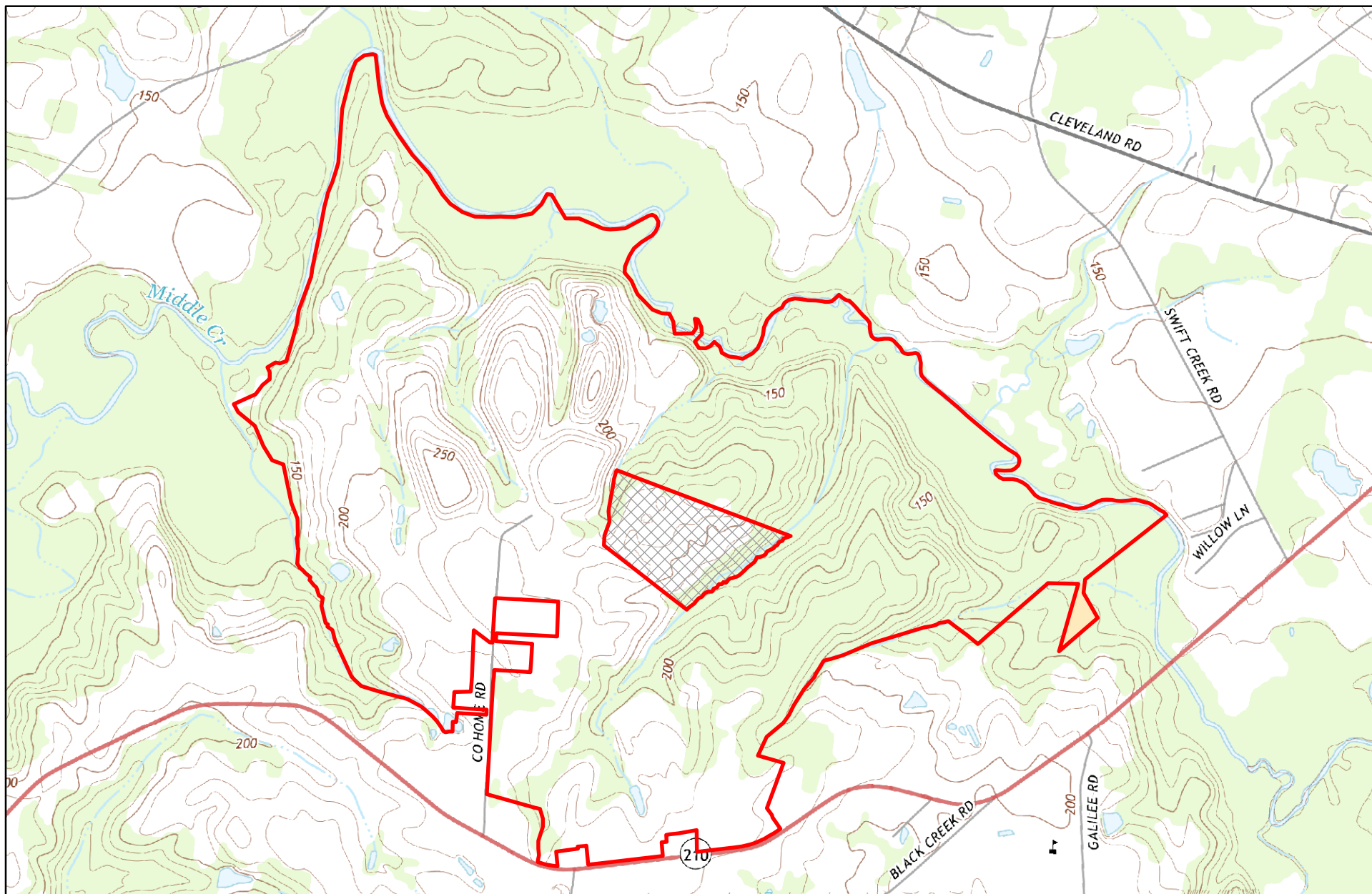

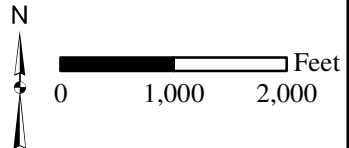



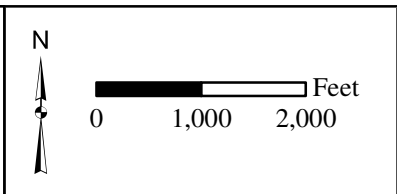
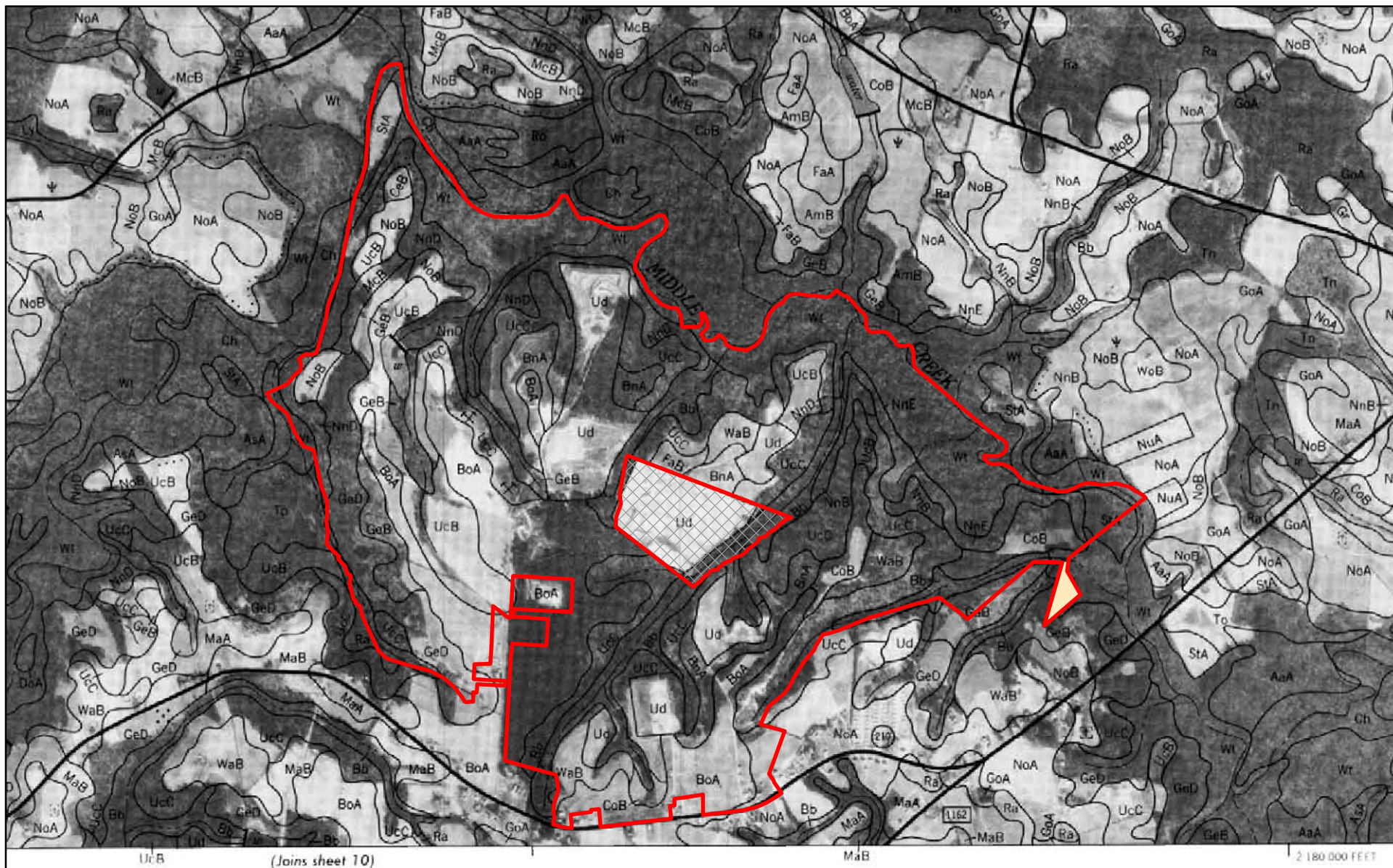
 <p>May 2019</p>	<div style="display: flex; align-items: center;"> <div style="margin-right: 20px;"> <p>N</p>  </div> <div style="margin-right: 20px;"> <p>0 0.5 1 Miles</p>  </div> <div> <p>  Property Boundary  USGS Named Streams </p> </div> </div>	<p>Figure 1: Project Vicinity</p> <p>Johnston County Landfill Phases 6-10 Johnston County, NC</p>
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		 Property Boundary	Map Date: May 2019	Figure 2: USGS Map Johnston County Landfill Phases 6-10 Johnston County, NC
		 Property Not Studied	Revised:	
		 NCDOT Borrow Pit	Revised:	
		Powhatan (2013) USGS 1:24,000 Quadrangle Map		

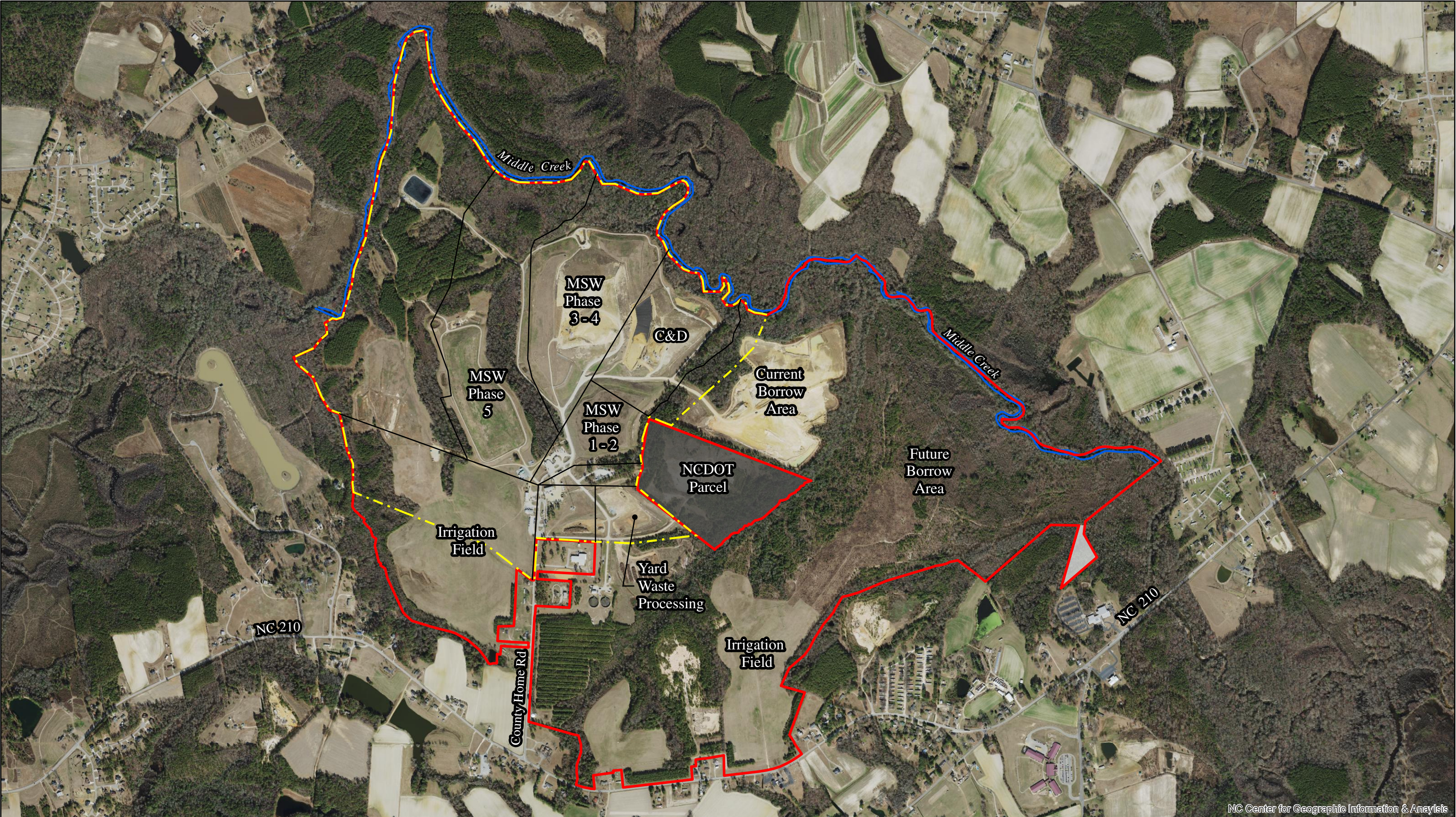


- Property Boundary
 - Property Not Studied
 - NCDOT Borrow Pit
- Johnston County NRCS Soil Survey Map 6

Map Date: May 2019
Revised:
Revised:
Revised:

Figure 3: NRCS Map

**Johnston County Landfill
Phases 6-10
Johnston County, NC**



NC Center for Geographic Information & Analysis



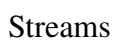
0 500 1,000 Feet



Property Boundary



Deed Breakouts



Streams

2017 NC Statewide Aerial Photography

Facility Boundary



Property Not Studied



NCDOT Parcel

Map Date: May 2019

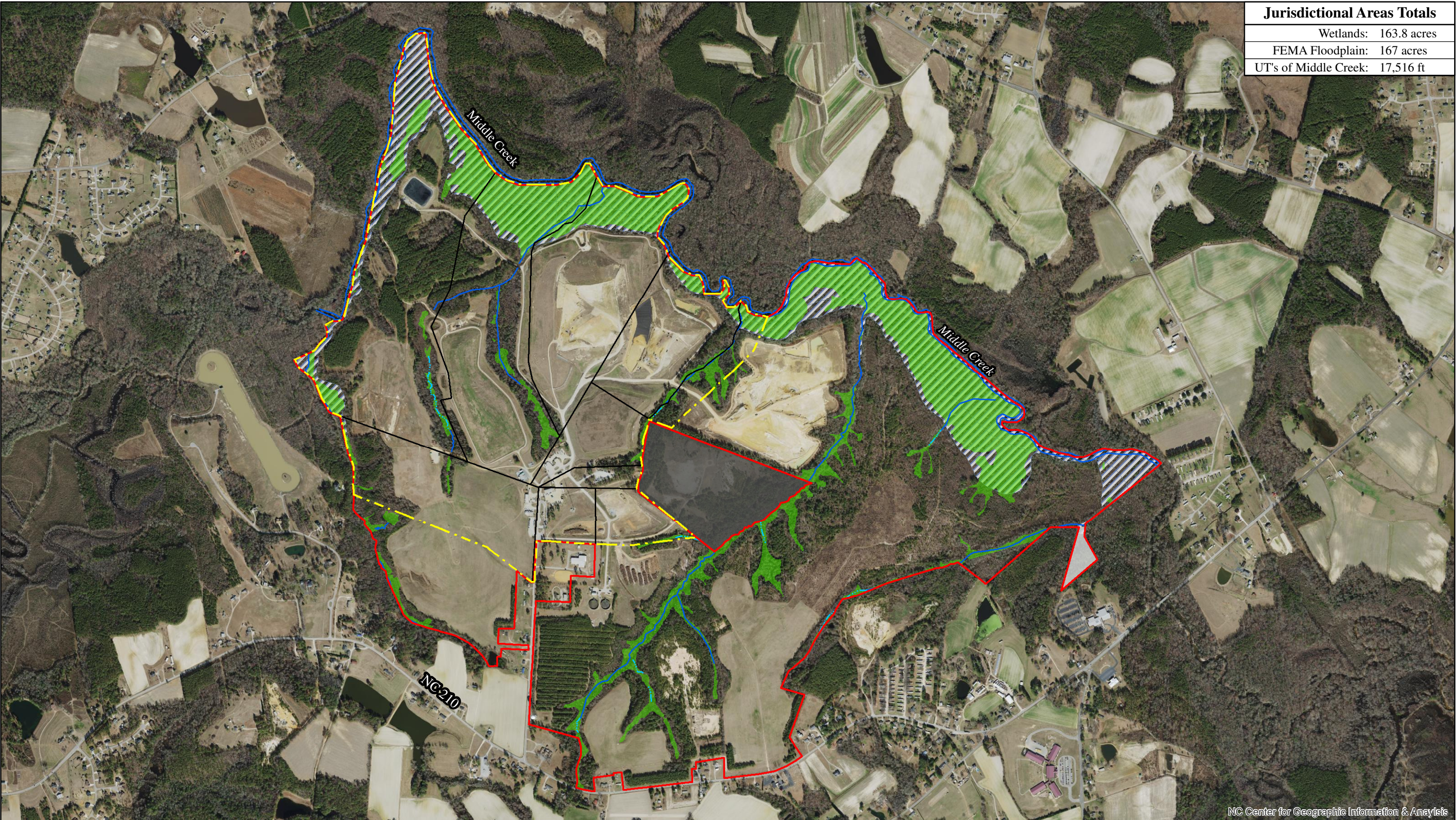
Revised:

Revised:

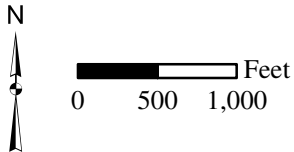
Revised:

Figure 4: Site Overview

**Johnston County Landfill
Phases 6-10
Johnston County, NC**



Jurisdictional Areas Totals	
Wetlands:	163.8 acres
FEMA Floodplain:	167 acres
UT's of Middle Creek:	17,516 ft



- | | | |
|-------------------|--------------------------|--------------|
| Property Boundary | NCDOT Parcel | Wetlands |
| Facility Boundary | Property Not Studied | Intermittent |
| Deed Breakouts | FEMA 100 Year Floodplain | Perennial |
- 2017 NC Statewide Aerial Photography

Map Date: May 2019

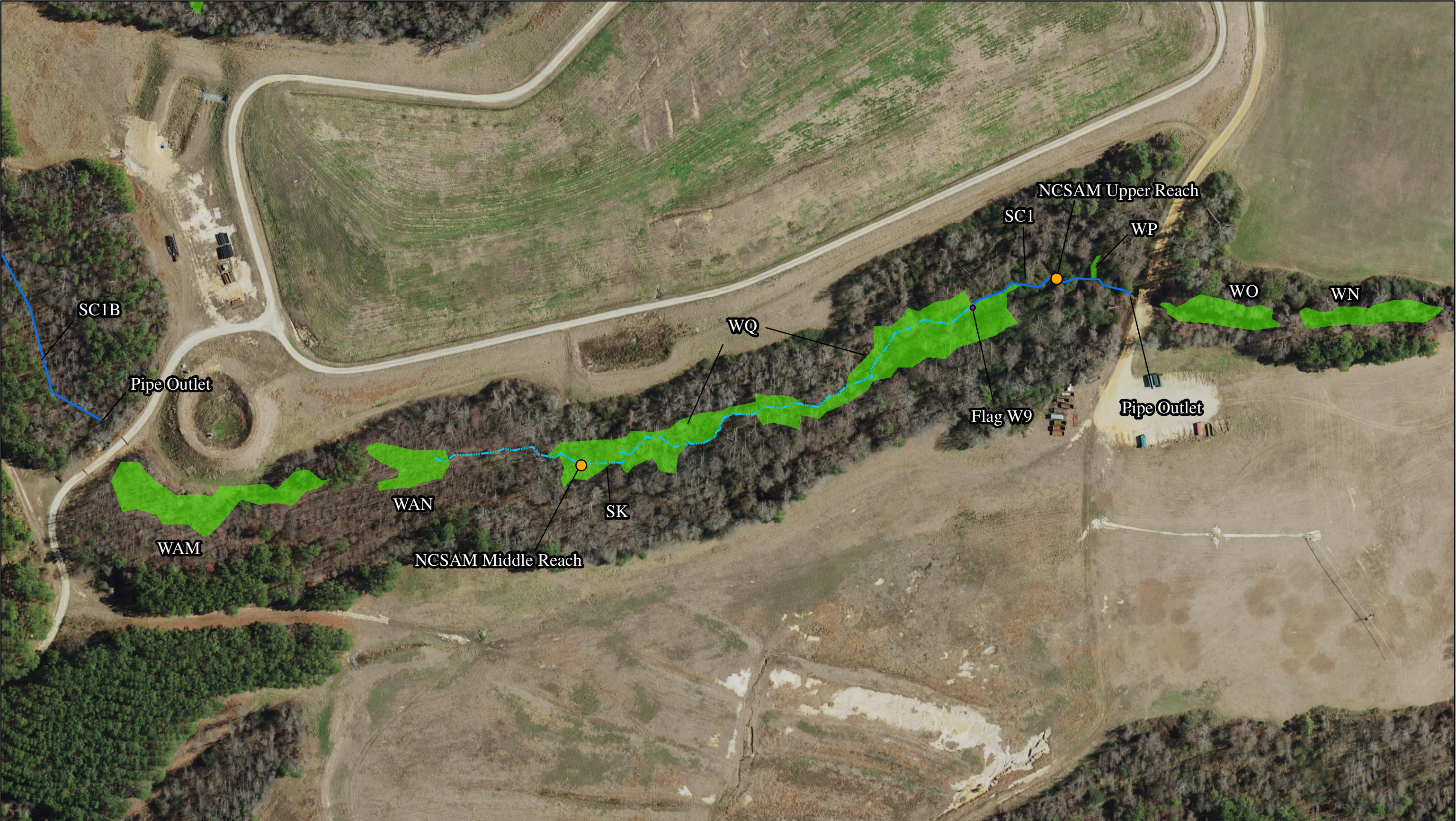
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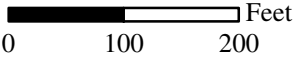



Revised:

Revised:

Figure 5: Jurisdictional Areas

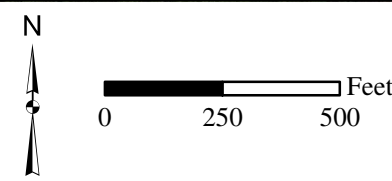
**Johnston County Landfill
Phases 6-10
Johnston County, NC**



	 	 Intermittent Stream  Perennial Stream 2017 NC Statewide Aerial Photography	 Wetlands	Map Date: May 2019	Figure 6.1: Impact Area 1 Johnston County Landfill Phases 6-10 Johnston County, NC
				Revised:	
				Revised:	
				Revised:	



NC Center for Geographic Information & Analysis

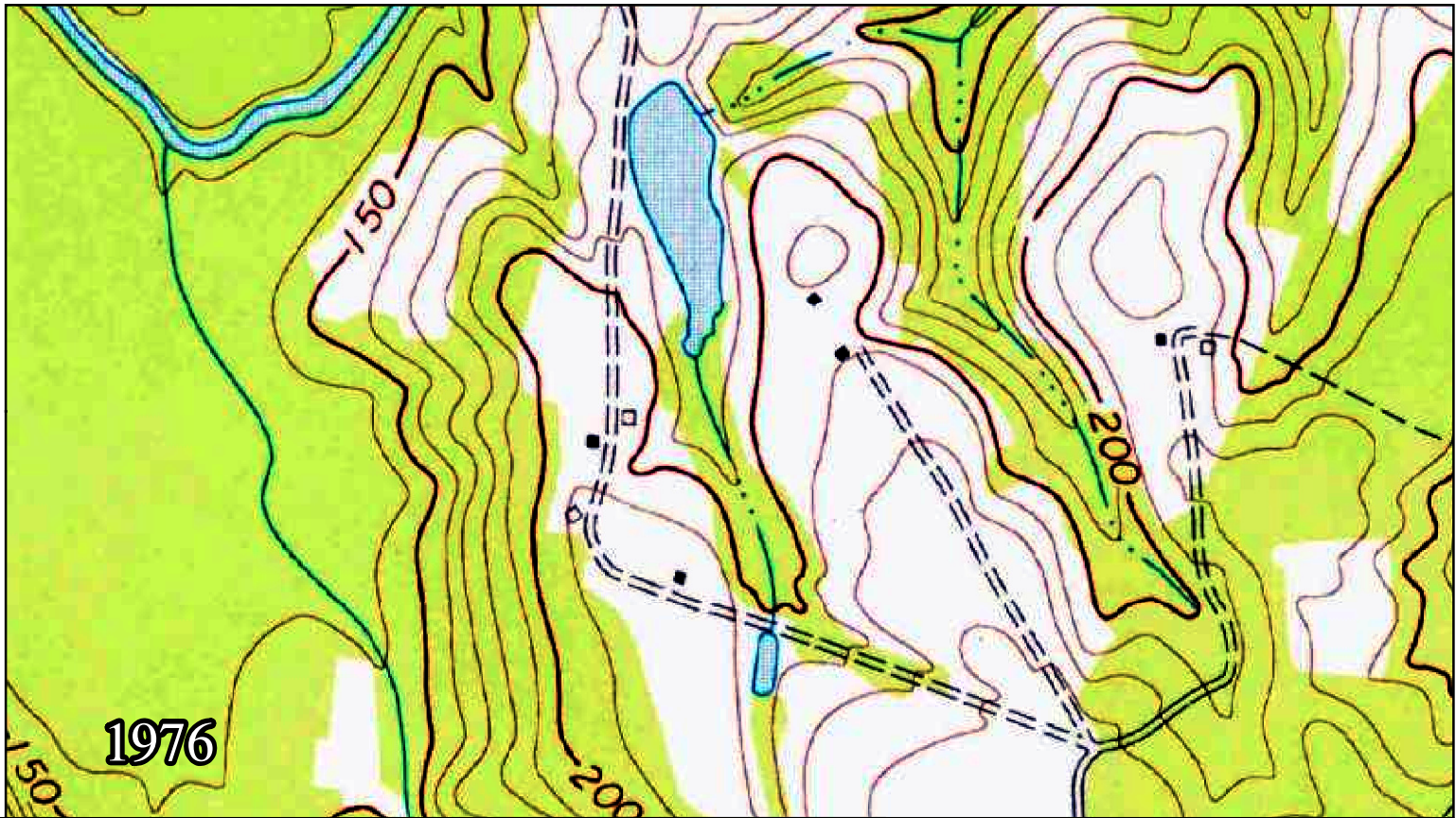
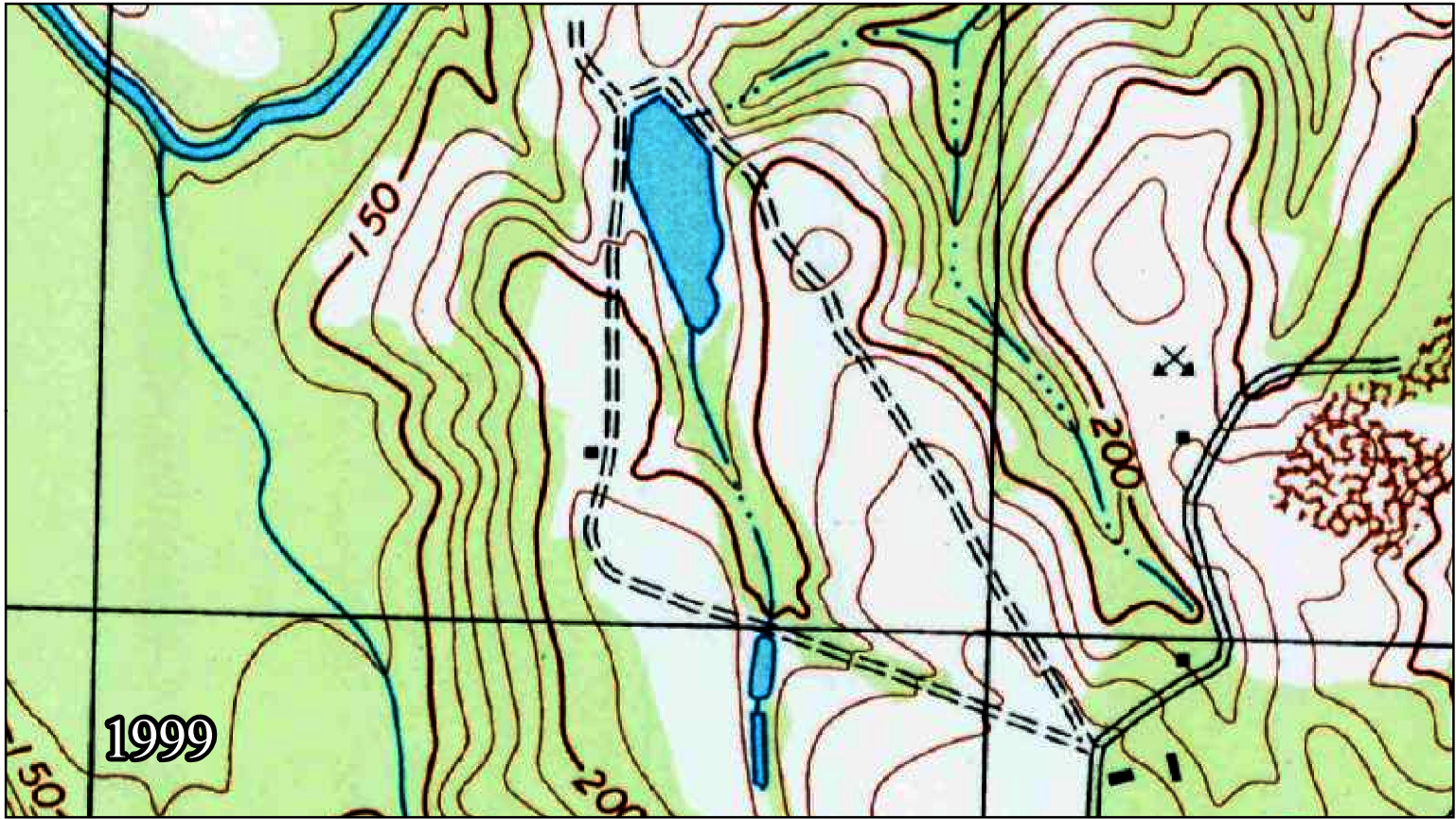
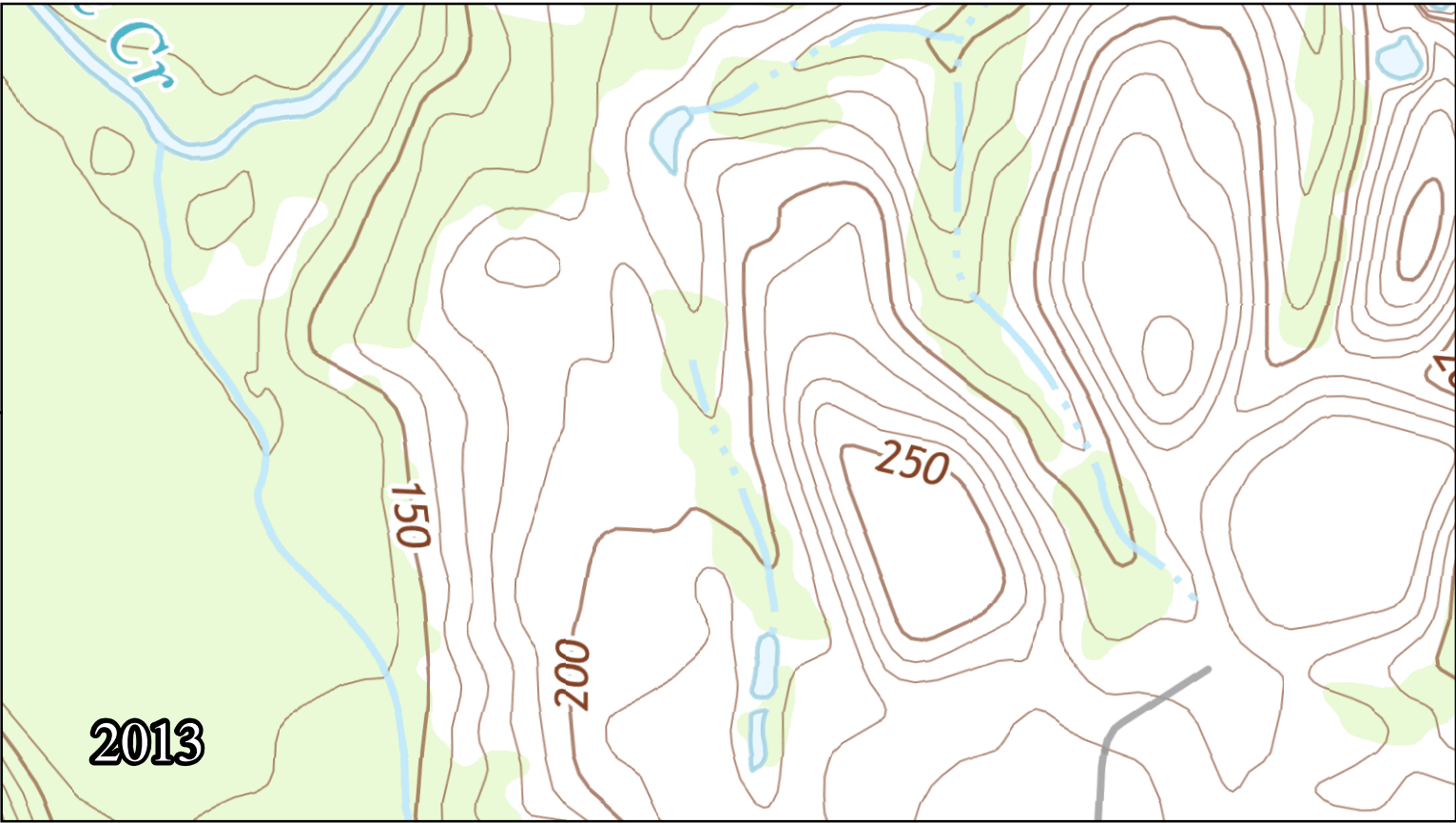


- Property Boundary
 - Wetlands
 - Intermittent Stream
 - Facility Boundary
 - Perennial Stream
- 2017 NC Statewide Aerial Photography

Map Date: May 2019
Revised:
Revised:
Revised:

Figure 6.2: Impact Area 2-4

**Johnston County Landfill
Phases 6-10
Johnston County, NC**



0 500 1,000 Feet

**Powhatan (1976, 1982, 1999, 2013)
USGS 1:24,000 Quagrange Map**

Map Date: May 2019

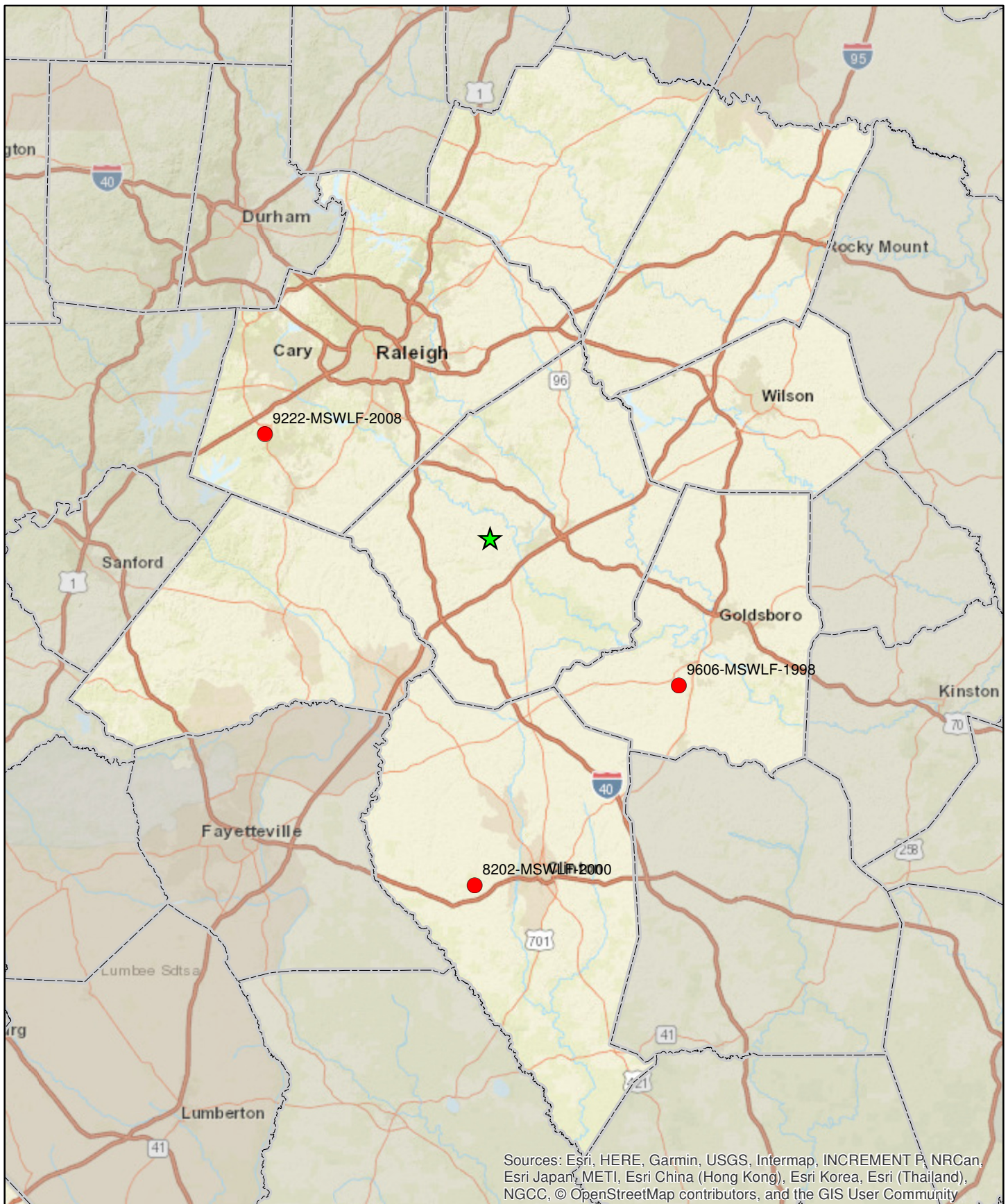
Revised:

Revised:

Revised:

Figure 7 : USGS History

**Johnston County Landfill
Phases 6-10
Johnston County, NC**



Johnston County Landfill

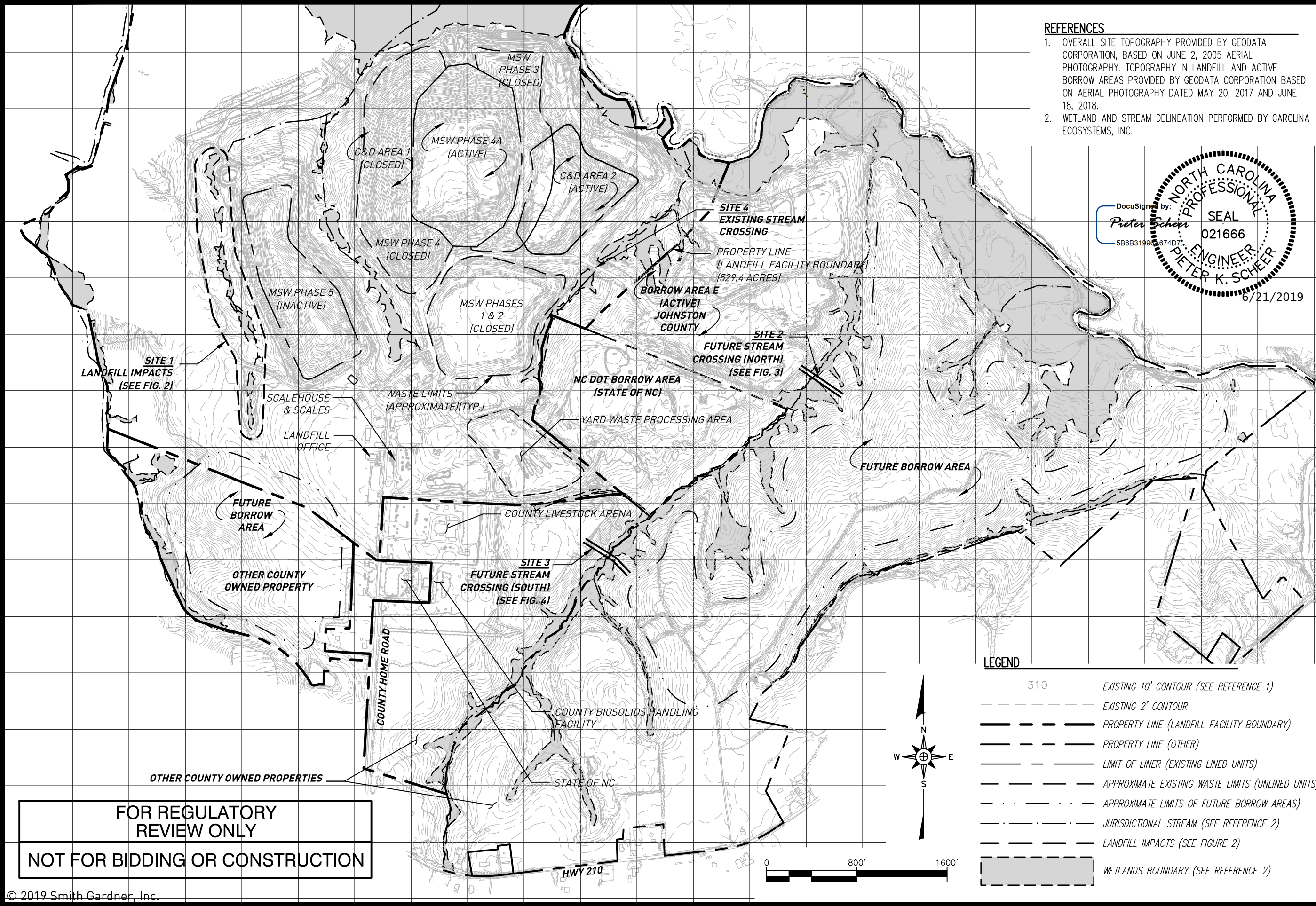


Surrounding MSW Landfills

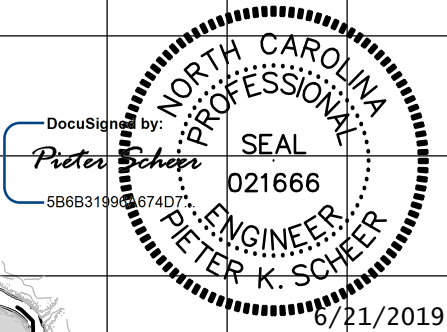
0 10
Miles

Figure 8: Active Permitted MSW Landfills

**Johnston County Landfill
Phases 6-10
Johnston County, NC**



- REFERENCES**
- OVERALL SITE TOPOGRAPHY PROVIDED BY GEODATA CORPORATION, BASED ON JUNE 2, 2005 AERIAL PHOTOGRAPHY. TOPOGRAPHY IN LANDFILL AND ACTIVE BORROW AREAS PROVIDED BY GEODATA CORPORATION BASED ON AERIAL PHOTOGRAPHY DATED MAY 20, 2017 AND JUNE 18, 2018.
 - WETLAND AND STREAM DELINEATION PERFORMED BY CAROLINA ECOSYSTEMS, INC.



- LEGEND**
- 310 EXISTING 10' CONTOUR (SEE REFERENCE 1)
 - EXISTING 2' CONTOUR
 - PROPERTY LINE (LANDFILL FACILITY BOUNDARY)
 - PROPERTY LINE (OTHER)
 - LIMIT OF LINER (EXISTING LINED UNITS)
 - APPROXIMATE EXISTING WASTE LIMITS (UNLINED UNITS)
 - APPROXIMATE LIMITS OF FUTURE BORROW AREAS)
 - JURISDICTIONAL STREAM (SEE REFERENCE 2)
 - LANDFILL IMPACTS (SEE FIGURE 2)
 - WETLANDS BOUNDARY (SEE REFERENCE 2)

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PREPARED FOR:

JOHNSTON COUNTY LANDFILL FACILITY
EXISTING CONDITIONS

DRAWN:	L.H.B.	APPROVED:	P.K.S.	SCALE:	1" = 800'	FIGURE NO.	EX. 1
DATE:	Jun 2019	PROJECT NO.:	JOHN 15-5	FILENAME:	JOHN-B0777		

PREPARED BY:

NC LIC. NO. F-1370 (ENGINEERING)
SC COA NO. C01488

DocuSigned by:

Peter K. Scheer

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SEAL

021666

ENGINEER

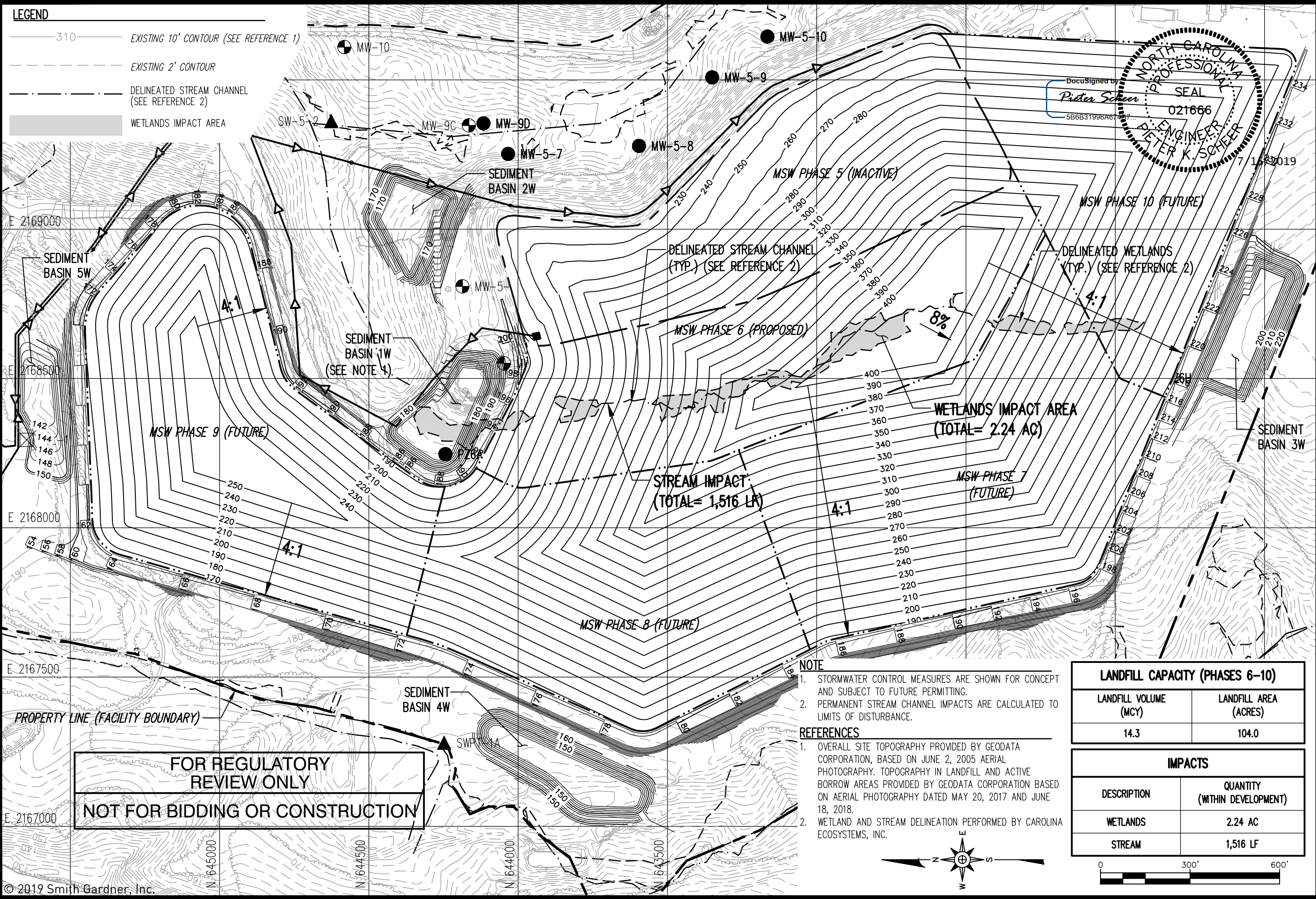
PETER K. SCHEER

6/21/2019

SMITH+GARDNER

14 N. Boylan Avenue, Raleigh NC 27603 | 919.828.0577
1526 Richland St., Columbia SC 29201

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PREPARED BY: **SMITH+GARDNER**

NC LIC. NO. F-1370 (ENGINEERING)
SC COA NO. 001488

14 N. Boylan Avenue, Raleigh NC 27603 | 919.828.0577
1526 Richland St., Columbia SC 29201

FIGURE NO. EX. 2

SCALE: 1" = 300'

APPROVED: P.K.S.

DRAWN: L.H.B.

FILENAME: JOHN-B0778

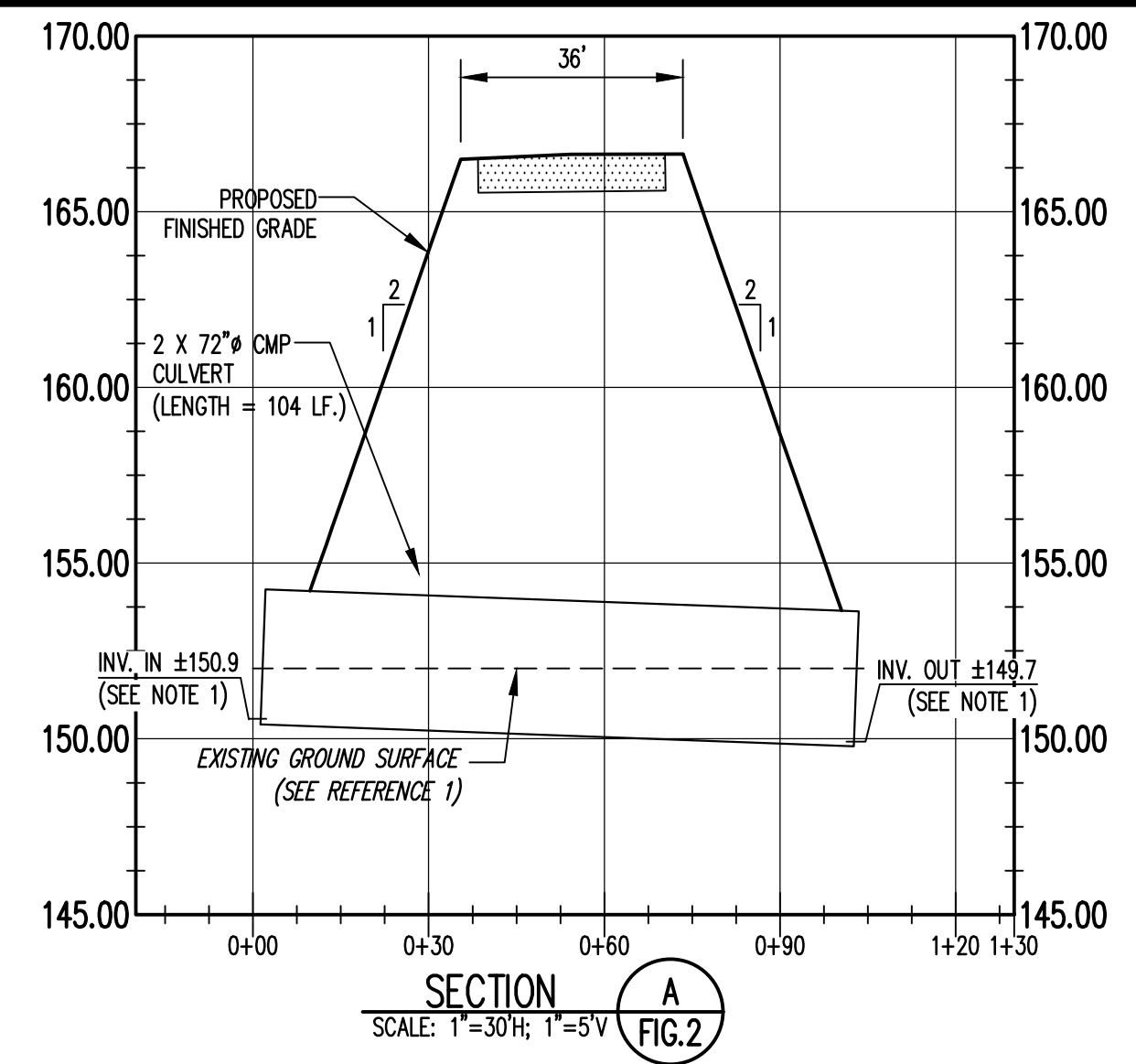
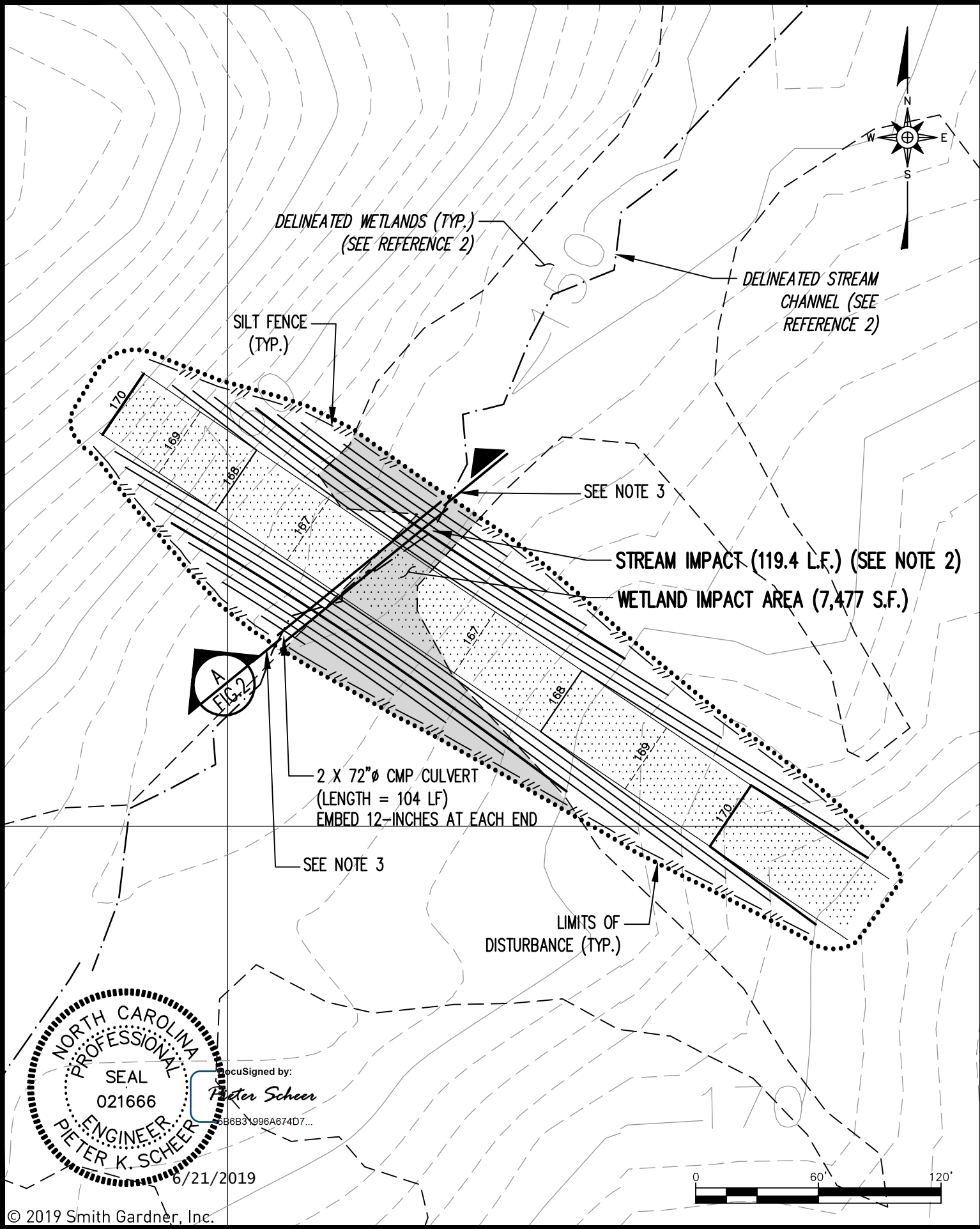
PROJECT NO: JOHN 15-5

DATE: Jun 2019

JOHNSTON COUNTY LANDFILL FACILITY

SITE 1 - LANDFILL IMPACTS

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- LEGEND**
- 310 — EXISTING 10' CONTOUR (SEE REFERENCE 1)
 - - - - - EXISTING 2' CONTOUR
 - - - - - WETLANDS (SEE REFERENCE 2)
 - . - . - . DELINEATED STREAM CHANNEL (SEE REFERENCE 2)
 - /// - /// - SILT FENCE
 - LIMITS OF DISTURBANCE
 - AGGREGATE SURFACING
 - WETLANDS IMPACT AREA

- NOTE**
1. EMBED CULVERT 12-INCHES AT EACH END. ADJUST INVERT ELEVATIONS AS REQUIRED TO MATCH FIELD CONDITIONS.
 2. PERMANENT STREAM CHANNEL IMPACTS ARE CALCULATED TO LIMITS OF DISTURBANCE.
 3. AN ADDITIONAL 15 LF OF TEMPORARY STREAM CHANNEL IMPACT AT EACH END OF THE CULVERT IS ANTICIPATED FOR CONSTRUCTION PHASING AND DEWATERING.
- REFERENCES**
1. OVERALL SITE TOPOGRAPHY PROVIDED BY GEODATA CORPORATION, BASED ON JUNE 2, 2005 AERIAL PHOTOGRAPHY. TOPOGRAPHY IN LANDFILL AND ACTIVE BORROW AREAS PROVIDED BY GEODATA CORPORATION BASED ON AERIAL PHOTOGRAPHY DATED MAY 20, 2017 AND JUNE 18, 2018.
 2. WETLAND AND STREAM DELINEATION PERFORMED BY CAROLINA ECOSYSTEMS, INC.

PREPARED BY: NC LIC. NO. F-1370 (ENGINEERING) SC COA NO. C01488

FIGURE NO. EX. 3

SCALE: AS SHOWN

APPROVED: P.K.S.

PROJECT NO: JOHNSTON 15-5

DRAWN: L.H.B.

DATE: Jun 2019

FILENAME: JOHN-B0774

JOHNSTON COUNTY LANDFILL FACILITY

SITE 2 - STREAM CROSSING NORTH

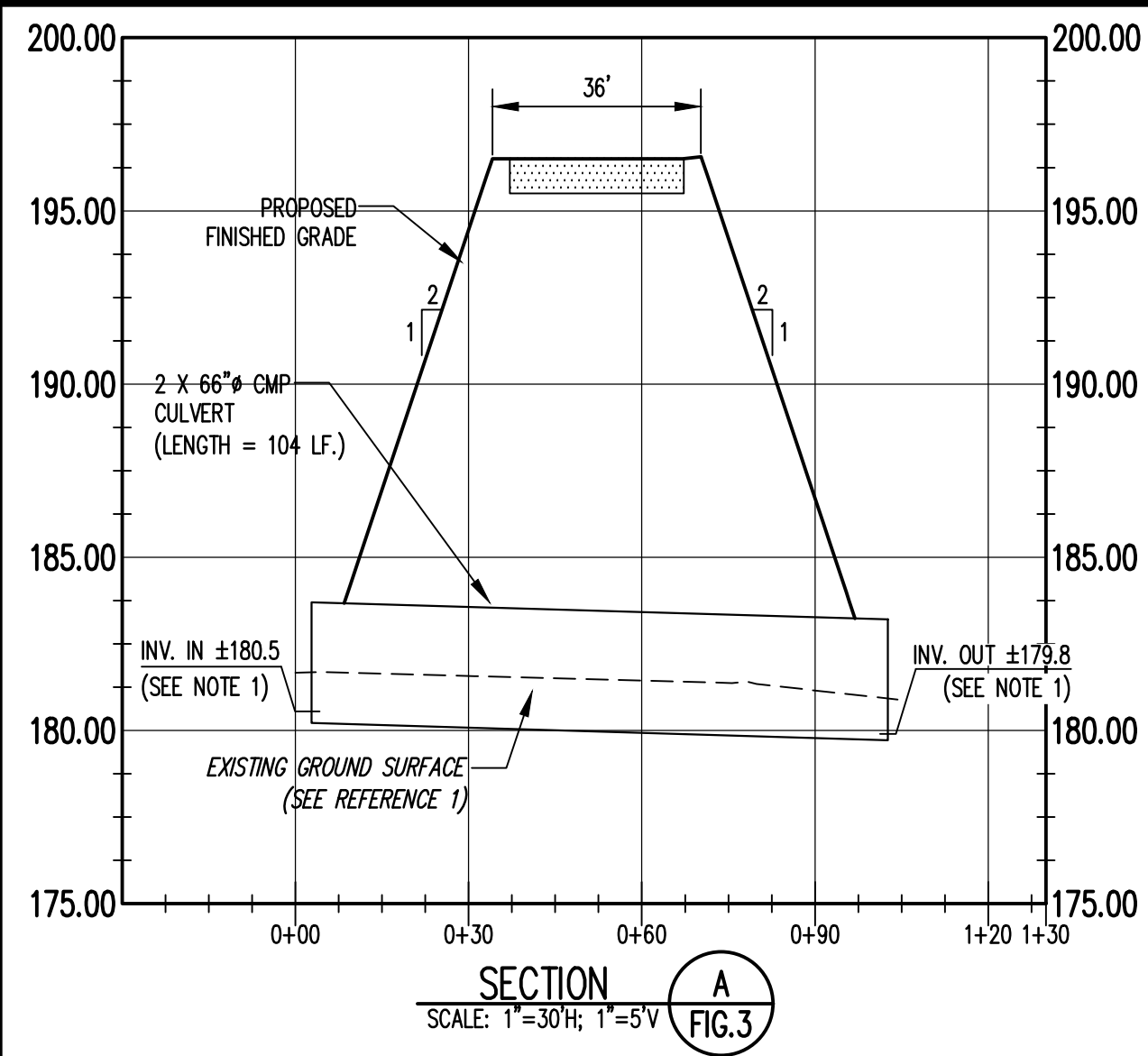
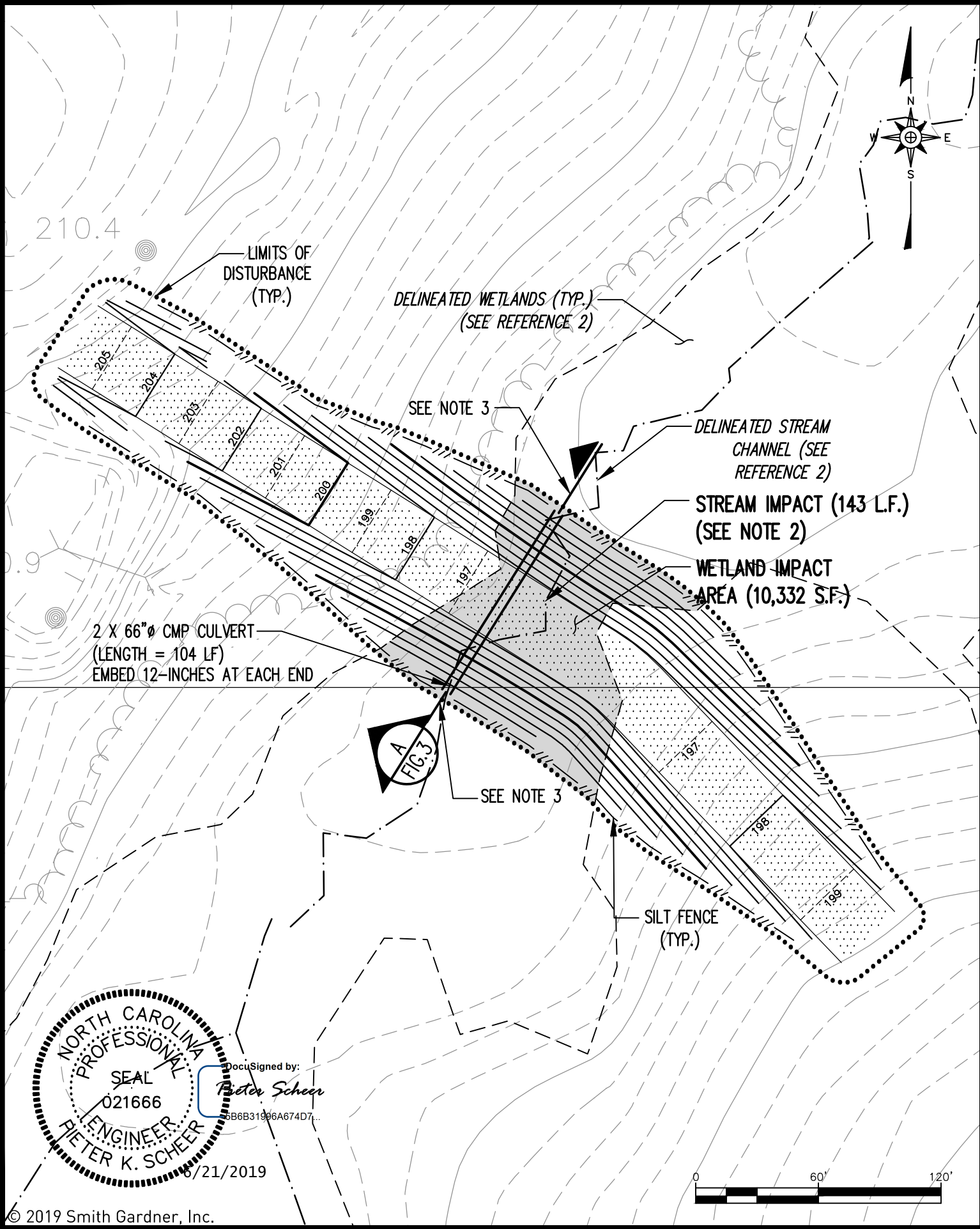
STEAM AND WETLANDS IMPACTS

SMITH+GARDNER

14 N. Boylan Avenue, Raleigh NC 27603 | 919.828.0577

1526 Richland St., Columbia SC 29201

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- LEGEND**
- 310 — EXISTING 10' CONTOUR (SEE REFERENCE 1)
 - - - - - EXISTING 2' CONTOUR
 - - - - - WETLANDS (SEE REFERENCE 2)
 - . - . - . DELINEATED STREAM CHANNEL (SEE REFERENCE 2)
 - /// - /// - SILT FENCE
 - LIMITS OF DISTURBANCE
 - [Pattern] AGGREGATE SURFACING
 - [Pattern] WETLANDS IMPACT AREA

- NOTE**
1. EMBED CULVERT 12-INCHES AT EACH END. ADJUST INVERT ELEVATIONS AS REQUIRED TO MATCH FIELD CONDITIONS.
 2. PERMANENT STREAM CHANNEL IMPACTS ARE CALCULATED TO LIMITS OF DISTURBANCE.
 3. SAME AS NOTE 3 ON FIGURE 3.
- REFERENCES**
1. OVERALL SITE TOPOGRAPHY PROVIDED BY GEODATA CORPORATION, BASED ON JUNE 2, 2005 AERIAL PHOTOGRAPHY. TOPOGRAPHY IN LANDFILL AND ACTIVE BORROW AREAS PROVIDED BY GEODATA CORPORATION BASED ON AERIAL PHOTOGRAPHY DATED MAY 20, 2017 AND JUNE 18, 2018.
 2. WETLAND AND STREAM DELINEATION PERFORMED BY CAROLINA ECOSYSTEMS, INC.

PREPARED FOR: **JOHNSTON COUNTY LANDFILL FACILITY**
SITE 3 - STREAM CROSSING SOUTH
STEAM AND WETLANDS IMPACTS

PREPARED BY: **SMITH+GARDNER**
NC LIC. NO. F-1370 [ENGINEERING]
SC COA NO. C01488
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1526 Richland St., Columbia SC 29201

APPROVED: **L.H.B.** **P.K.S.** **AS SHOWN** **EX. 4**

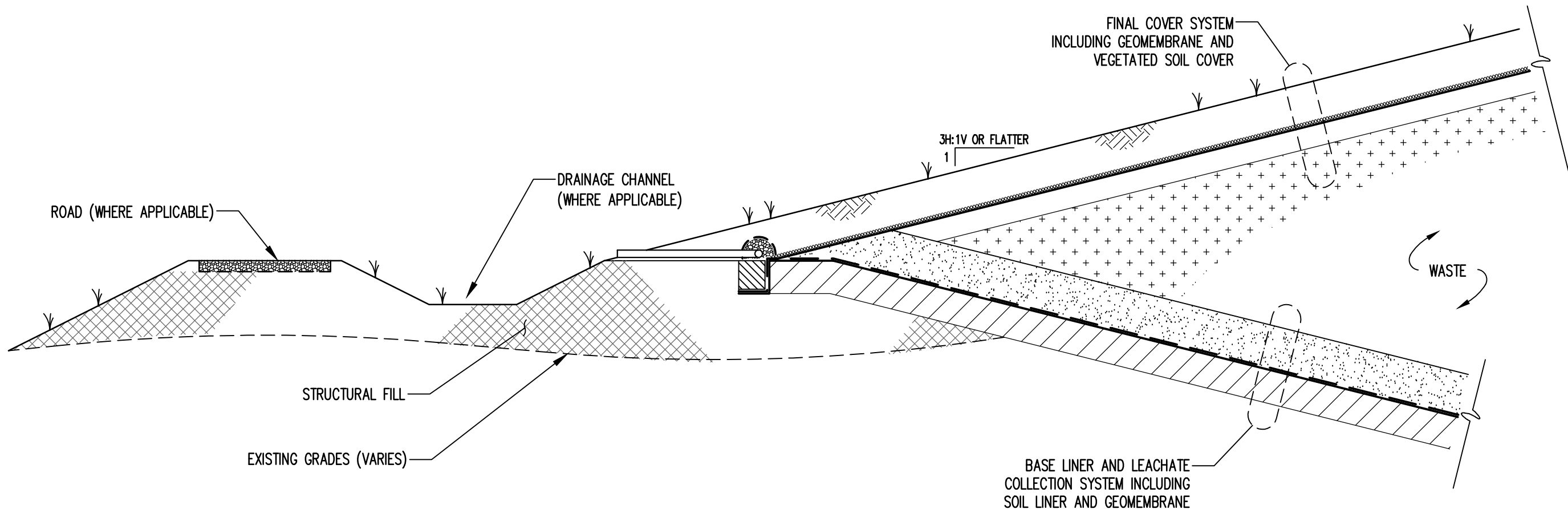
DATE: **Jun 2019** **JOHNSTON 15-5** **JOHN-B0774**

FIGURE NO. **FIG. 3** **EX. 4**

SCALE: **AS SHOWN**

PROJECT NO: **JOHNSTON 15-5**

FILENAME: **JOHN-B0774**



PERIMETER BERM CROSS SECTION

DETAIL
NOT TO SCALE

1
FIG.5



DocuSigned by:
Peter Scheer
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6/21/2019

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PREPARED BY:		FIGURE NO.		SCALE:		APPROVED:		DRAWN:		PREPARED FOR:	
NC LIC. NO. F-1370 [ENGINEERING] SC COA NO. C01488		EX. 5		AS SHOWN		P.K.S.		L.H.B.		JOHNSTON COUNTY LANDFILL FACILITY DETAILS	
SMITH+GARDNER 14 N. Boylan Avenue, Raleigh NC 27603 919.828.0577 1526 Richland St., Columbia SC 29201		FILENAME:		PROJECT NO:		DATE:		JOHNSTON 15-5		Jun 2019	
										JOHN-B0774	

