

**SITE SUMMARY REPORT**  
**Old Charlotte Landfill/Vanguard Center**  
**NONCD 0001065**  
**Mecklenburg County**

Senate Bill 1492  
State of North Carolina  
State Contract N06009S  
Schnabel Project No. 06210002.30

July 21, 2010  
Revised September 20, 2010

Prepared for:

North Carolina Department of Environment and Natural Resources  
Superfund Section  
Inactive Hazardous Sites Branch  
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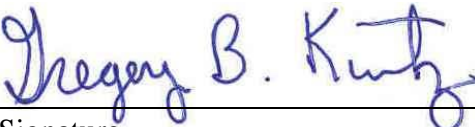
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## SITE LOCATION RESEARCH SUMMARY

ID NUMBER: NONCD 0001065  
SITE NAME(S): Old Charlotte Landfill/Vanguard Center  
LOCATION: 409 Tyvola Road, Charlotte, NC 28217  
COUNTY: Mecklenburg

LANDFILL SIZE: 19.0 acres (Disposal Area enclosed by GPS points obtained during site visit, LiDAR imagery, and review of historical aerial photographs)  
PROPERTY SIZE: 21.0 acres (from Mecklenburg County GIS)  
DATE OPENED: Approximately late 1950s (data obtained from historical aerial photographs)  
DATE CLOSED: Approximately 1970 (data obtained from Mr. Keith Carpenter and Mr. Doug Pierotti, City Engineers for the City of Charlotte Engineering and Property Management, and Mr. Joe Hack, Contracted Operations Core Process Manager, Mecklenburg County Solid Waste Management)

CURRENT OWNER: Stonebridge Associates  
CURRENT OWNER CONTACT: Mr. Kent Marquis  
CURRENT OWNER ADDRESS: 4733 Bethesda Avenue, Bethesda, MD 20814  
CURRENT OWNER TELEPHONE NUMBER: 301-913-8610  
TAX PARCEL No./PIN No.: 16911105  
DEED REFERENCE: 04317-990 (7/7/1980)

COORDINATES: (at site entrance from handheld GPS)  
State Plane Coordinates (NAD83, meters): Northing: 158777 Easting: 437848  
Latitude: N35° 09' 59.8" Longitude: W80° 53' 08.2"

## AREAS OF NOTE

- 1) There is evidence of human activity on the Disposal Area as indicated by an access road to a billboard, recent trash dumping, and “No Trespassing” signs. Piezometers were observed near the eastern and northern boundaries of the Site.
- 2) A portion of a gas station building is located on the southeastern part of the Site.
- 3) Potential landfill gas migration pathways observed on the Disposal Area and Site include holes, piezometers, underground electric line, and gas station.
- 4) According to Mr. Kent Marquis, Principal of Stonebridge Associates, piezometers were installed by Stonebridge Associates near the boundary of the Disposal Area. Four piezometers were observed at the time of the site visit. These piezometers have not been sampled by Stonebridge Associates.
- 5) An unnamed intermittent stream is located to the south of the southeastern part of the Disposal Area. An area of standing water was observed on the northwestern part of the Disposal Area.
- 6) Hummocky topography, an erosional gully, holes, landfill slope, and depressions were observed on the northern half of the Disposal Area. Steep slopes approximately 10 to 15 feet high were observed along the perimeter of the Site and Disposal Area. A landfill slope located through the center of the Disposal Area was approximately five feet high with disposal material protruding from the slope. Berms approximately 3 to 5 feet high were observed on the northern and eastern portions of the Disposal Area.
- 7) Exposed debris observed on the Disposal Area consisted of tires, scrap metal, plastics, plastic and glass bottles, metal and aluminum cans, insulation, concrete, 55-gallon drums, a paint can, PVC pipes, garden hoses, bricks and black plastic plant pots.
- 8) Residences, office buildings, McDonald’s restaurant, commercial buildings, and a gas station are located within 1,000 feet of the Disposal Area.

## **SITE SUMMARY**

### **1.0 SITE CONDITIONS**

This section discusses the observed conditions on the Site, as defined as the property (Tax Parcel #16911105) on which the Disposal Area is located. The Disposal Area is defined as the area observed or reported to have been used for waste placement or burial. The boundary (perimeter) of this area is the observed limit of waste material based on field observations and the inferred limit based on a review of historical aerial photographs and LiDAR images. The site visit was conducted on June 30, 2010. Photographs illustrating site conditions are included in Appendix D.

The Site is located in Mecklenburg County, near Charlotte, NC. Driving directions to the Site from the intersection of Interstate 77 and Tyvola Road (Exit 5) are as follows:

1. Drive west on Tyvola Road approximately 0.4 miles.
2. Turn left onto Seventy-Seven Center Drive and drive north approximately 0.3 miles.
3. Turn left into the parking lot of the office buildings on Seventy-Seven Center Drive. The entrance to the Site is along southern or western boundary of the office building parking lots.

### **1.1 On-site Structures**

No on-site buildings or other structures were observed on the Disposal Area during the site visit. A portion of a gas station is located on the southeastern part of the Site. Structures within 50 feet of the Site are six office buildings along the northern and eastern boundaries of the Site. These buildings are one to four stories with ground level floors. Structures along the southern boundary of the Site include a McDonald's restaurant and a gas station.

## **1.2 Current Site Usage**

According to Mr. Kent Marquis, Principal for the Stonebridge Associates, the Site is currently not in use. Observed evidence of recent human activity included the access road to the western billboard, recent trash disposal, “No Trespassing” signs near the southern billboard, and piezometers outside the northern and eastern boundary of the Site.

## **1.3 On-Site Water Supply Wells and Intakes**

No on-site water supply wells were observed on the Site during the site visit. No water meters or fire hydrants were observed on the Site during the site visit.

## **1.4 Surface Water Features**

An unnamed intermittent stream is located along the southern perimeter of the Disposal Area. The bed of the unnamed intermittent stream was approximately ten feet wide with flowing cloudy water and contained sand and boulders at the time of the site visit.

Standing water was observed on the northwestern part of the Disposal Area. The standing water was approximately 20 feet in diameter and the water was cloudy. Disposal material was not observed in the water at the time of the site visit.

## **1.5 Disposal Area**

Access to the Disposal Area is from the office building parking lots south of Seventy-Seven Center Drive (Photo 1). The Disposal Area occupies 19.0 acres based on the estimated Disposal Area perimeter shown on Figures 1 through 3.

The ground surface of the Disposal Area slopes relatively uniformly toward the southwest. A comparison of the topography from the 1907 USGS 7.5 minute topographic quadrangle map (20 foot contours) with the 2009 topographic map from NCDOT (20 foot contours), indicates that disposal material has filled in the northwestern corner of the Disposal Area with up to 40 feet of material; the northern and central portions of the Disposal Area have been filled with up to 20 feet of material; and, up to 20 feet of material has been removed from the northeastern corner of the Disposal Area (Figure E-1A).

A comparison of the topography from the 1993 USGS 7.5 minute topographic quadrangle map (10 foot contours, based on 1965 aerial photography) with the 2009 topographic map from the NCDOT (20 foot contours), indicates that the southeastern part of the Disposal Area has been lowered up to 10 feet to a relatively level surface. The estimated years of landfill operation were from the late 1950s to 1970, so the 1993 USGS map (based on 1965 aerial photography) may have represented the land surface near the end of the disposal period. The LiDAR Shaded Relief Map (Figure 5) shows anomalous relief in the central part of the Disposal Area stretching from the northeast corner to the southwest part of the Disposal Area and linear features trending north-south on the southern part of the Disposal Area (Figure E-1).

The depth of waste and amount of material removed is estimated based on a comparison of topographic maps of different vintages constructed using different methods. Differences between elevations on the maps may reflect actual elevation changes or may be apparent differences due to the different map making methods. The elevation comparisons are approximate and differences in scale and methods of mapping are not sufficient to evaluate some changes in topography.

The approximate Disposal Area perimeter is illustrated on the figures and on aerial photographs in Appendix E. A table of GPS coordinates for the Site entrance and the Disposal Area perimeter is presented in Table 1. The Disposal Area perimeter location is approximate and is based on visual observations made at the time of the site visit and interpretation of aerial photographs and LiDAR images. Figures 4 and 5 show LiDAR shaded relief superimposed on the Disposal Area.

## **1.6 Disposal Area Conditions**

The Disposal Area was covered with deciduous trees approximately three to twelve inches in diameter, disposal material, rocks, leaves, briars, vines, bare ground, kudzu, and tall grass. Disposal material was observed on the central to northern part of the Disposal Area. Disposal material included tires, scrap metal, plastic and glass bottles, aluminum and metal cans, insulation, bricks, broken concrete, 55-gallon drums, a paint can, plastics, PVC pipes, garden hoses, and black plastic plant pots.

An erosional gully approximately two to four inches wide and one foot deep (Photo 14) and a hole about two feet in diameter and one foot deep (Photo 13) were observed on the northwestern part of the Disposal Area. Holes and depressions were also observed on the north central part of the Disposal Area (Photo 9) on a landfill slope. The landfill slope located through the center of the Disposal Area was approximately five feet high and disposal material was observed protruding from the slope at the time of the site visit (Photos 7 and 9). Hummocky topography (Photo 12), berms, and soil piles were observed in the northern and eastern part of the Disposal Area.



The observed Disposal Area was on a single tax parcel, Parcel Number 16911105. The perimeter of the Disposal Area was visually evident based on the presence of steep slopes along the boundaries of the Site. Due to the very heavily vegetated slopes and fences, the southern and western Disposal Area perimeters were identified using LiDAR images and historical aerial photographs. Dense vegetation also limited access to the central and southern parts of the Disposal Area.

Other than described above, no notable offensive odors, stained or discolored soils, or slope failures were observed during the site visit.

### **1.7 Evidence of Human Activity**

During the site visit evidence of human activity on the Disposal Area included recent dumping of trash along the access road to the western billboard and near the southern billboard, and piezometers outside the northern and eastern boundary of the Site.

### **1.8 Potential Landfill Gas Migration Pathways**

There were visible or evident potential gas migration pathways observed on the Disposal Area and Site. Potential gas migration pathways located on the Disposal Area and Site were:

- Underground electric line: near the western billboard on the Disposal Area.
- Holes: located on the northwestern and central part of the Disposal Area.
- Piezometers: located adjacent to the Site's northern and eastern boundaries.
- Gas station: located on the southeastern part of the Site.

### **1.9 Physical Barriers**

Site access is provided by the office building parking lots south of Seventy-Seven Center Drive. Steep slopes with thick vegetation along the boundary of the Site and Disposal Area are difficult to walk or climb over. Metal fences were observed along the southern and western boundary.

## 1.10 Other Pertinent Information

Some history of the Site was obtained during conversations with persons familiar with the Site.

The information obtained indicates that:

- Mr. Kent Marquis, Principal of Stonebridge Associates, provided verbal permission to access the Site.
- Mr. Marquis stated that the limits of the landfill are within the perimeter of the parcel. He stated that the landfill was decommissioned in 1962.
- Mr. Marquis stated that household debris and possibly chickens from a local chicken farm were disposed of in this landfill.
- Mr. Marquis stated that this property is not used because it is a landfill.
- Mr. Marquis stated that the adjacent business park is served by a public water supply.
- Mr. Marquis said that monitoring wells were installed at the Site, but Stonebridge Associates have not sampled the wells.
- Mr. Keith Carpenter, City Engineer for the City of Charlotte, stated that the landfill is located at the intersection of Tyvola Road and I-77 and is privately owned.
- Mr. Carpenter stated that he is unsure when the landfill opened, but it closed prior to 1970. He said that the limits of the landfill may be under the business park and the western part of the Disposal Area may have been removed during construction of I-77.
- Mr. Carpenter stated that the City of Charlotte placed household waste at the site and the material was placed in trenches.
- Mr. Joe Hack, Contracted Operations Core Process Manager for Mecklenburg County Solid Waste Management, was aware of the location of the landfill which closed prior to 1970, and stated that the area is served by a public water supply.
- Mr. Doug Pierotti, City Engineer for the City of Charlotte, stated that the landfill was closed in the 1970s, the City of Charlotte placed waste in the landfill, and material was not placed after January 1, 1983.

Notes from conversations with people familiar with the site are included in Appendix C. The information obtained from these conversations has not been verified or confirmed.

## **2.0 VICINITY CONDITIONS**

This section describes the observed general conditions in the vicinity of the Site, as defined by an area within 1,000 feet of the perimeter of the Disposal Area. Photographs illustrating vicinity conditions are included in Appendix D.

### **2.1 Structures Located on Adjacent Properties**

Structures described in this section are located on adjacent properties that have a shared property boundary with the Site.

A business park with six multi-level office buildings is located on multiple tax parcels to the north and east of the Site. A McDonald's restaurant, tax parcel 16911106, and a gas station, tax parcel 16911110, are located adjacent to the south of the Site. These structures are shown on Figure 2 and on aerial photographs in Appendix E.

### **2.2 Water Supply Wells and Intakes**

Water supply wells or well houses were not observed at residences along Seventy-Seven Center Drive within a 1,000-foot radius of the Disposal Area. Water meters were observed in the yards of several of the residences within 1,000 feet of the Site. Fire hydrants were observed within 1,000 feet of the Site. According to Mr. Joe Hack, Contracted Operations Core Process Manager for Mecklenburg County Solid Waste Management, the area within 1,000 feet of the Disposal Area perimeter is served by a public water supply.

No public water supply wells or intakes were listed on the NCDENR Public Water Supply Section's database (as of January 2010) within two miles of the Disposal Area.

### 2.3 Current Land Usage

Property in the vicinity of the Site is primarily commercial. Land usage at the time of the site visit within 1,000 feet of the Disposal Area perimeter was:

- North:** Business Park, apparent up-gradient direction from the Site.
- South:** McDonald's, gas station, Tyvola Road, apparent down-gradient direction from the Site.
- East:** Business Park, apparent down- to side-gradient direction from the Site.
- West:** Interstate 77 and residences, apparent down- to side-gradient direction from the Site.

### 2.4 Surface Water Features

An unnamed intermittent stream is located adjacent to the south of the Site. A portion of the stream flows through the southeastern corner of the Site. An unnamed intermittent stream is located approximately 500 feet west of the Site and flows to the south.

### 3.0 AERIAL PHOTOGRAPHY REVIEW

Aerial photographs were reviewed for the years 1938, 1951, 1956, 1968, 1983, 1999, 2004, and 2009. The estimated years of operation of the Site were from late 1950s to 1970. Observations of each of the photographs are included in the following table. Copies of the aerial photographs are included in Appendix E. Some aerial photographs are reproductions of original aerial photographs and have some distortion; therefore, overlaid Disposal Area Boundaries and other features may vary from their actual locations. Hand drawn lines and notations on the photographs denote soils mapping information drawn on the original photographs by the USDA NRCS.

Flight Year	Observations	Source
1938	Disposal Area is cleared. Curved linear features are observed throughout the Disposal Area. A structure is located on the northeastern part of the Disposal Area. Agricultural fields and scattered residences surround the Site. The NRCS has drawn a stream on the aerial photograph located on the southern part of the Site.	1
1951	The majority of the Disposal Area is cleared with curved linear features. Scattered trees are observed along the southern boundary and in the northern part of the Disposal Area.	1
1956	The Disposal Area is mostly cleared with curved linear features. More trees are visible on the southern and northern parts of the Disposal Area. The structure observed on the 1938-aerial photograph is difficult to view in this photograph. Surrounding areas are heavily wooded or agricultural fields.	1
1968	Disposal Area is cleared, except for a small patch on the southeastern most corner of the Site. A structure is observed on the northeastern part of the Disposal Area. Areas of disturbed ground are visible on the central and western parts of the Disposal Area. Possible chicken coops are located to the northeast of the Site. A dirt road is visible from the chicken coops to the landfill. I-77 is now visible.	1
1983	Disposal Area is partly cleared. Trees and dark vegetation is visible on the northern and southern parts of the Disposal Area. The structure observed in the 1968 photograph is no longer visible on the Site. A dirt road from the northeastern corner to the western side of the Disposal Area is visible. Dirt roads are visible through the tree-cover in the southern part of the Disposal Area. Four of the six office buildings have been constructed to the east of the Site. Tyvola Road and Seventy-Seven Center Drive are visible to the south and east of the Site, respectively.	1

1999	Disposal Area is wooded. An access road from the northeastern corner to the west of the Site for the billboard is visible on the Disposal Area. All office buildings are now visible to the north of the Site. The McDonalds and gas station are located to the south of the Site.	2
2004	Disposal Area is wooded and appears similar to the 1999 aerial photograph.	2
2009	The Disposal Area is wooded and the aerial photograph shows conditions representative of those observed during the visit.	2

Sources of aerial photos:

- 1) USDA NRCS office in Charlotte, NC
- 2) North Carolina One Map,  
[ftp://204.211.239.203/outgoing/raster/local\\_imagery/mecklenburg1999/](ftp://204.211.239.203/outgoing/raster/local_imagery/mecklenburg1999/)

This report was prepared specifically for the use of NCDENR Inactive Sites Branch under the Scope of Work defined in our contract dated October 26, 2005. Use of this document for other purposes or by other parties is at the sole risk of the user.

# TABLE

**TABLE 1**  
**Tabulated GPS Coordinates**

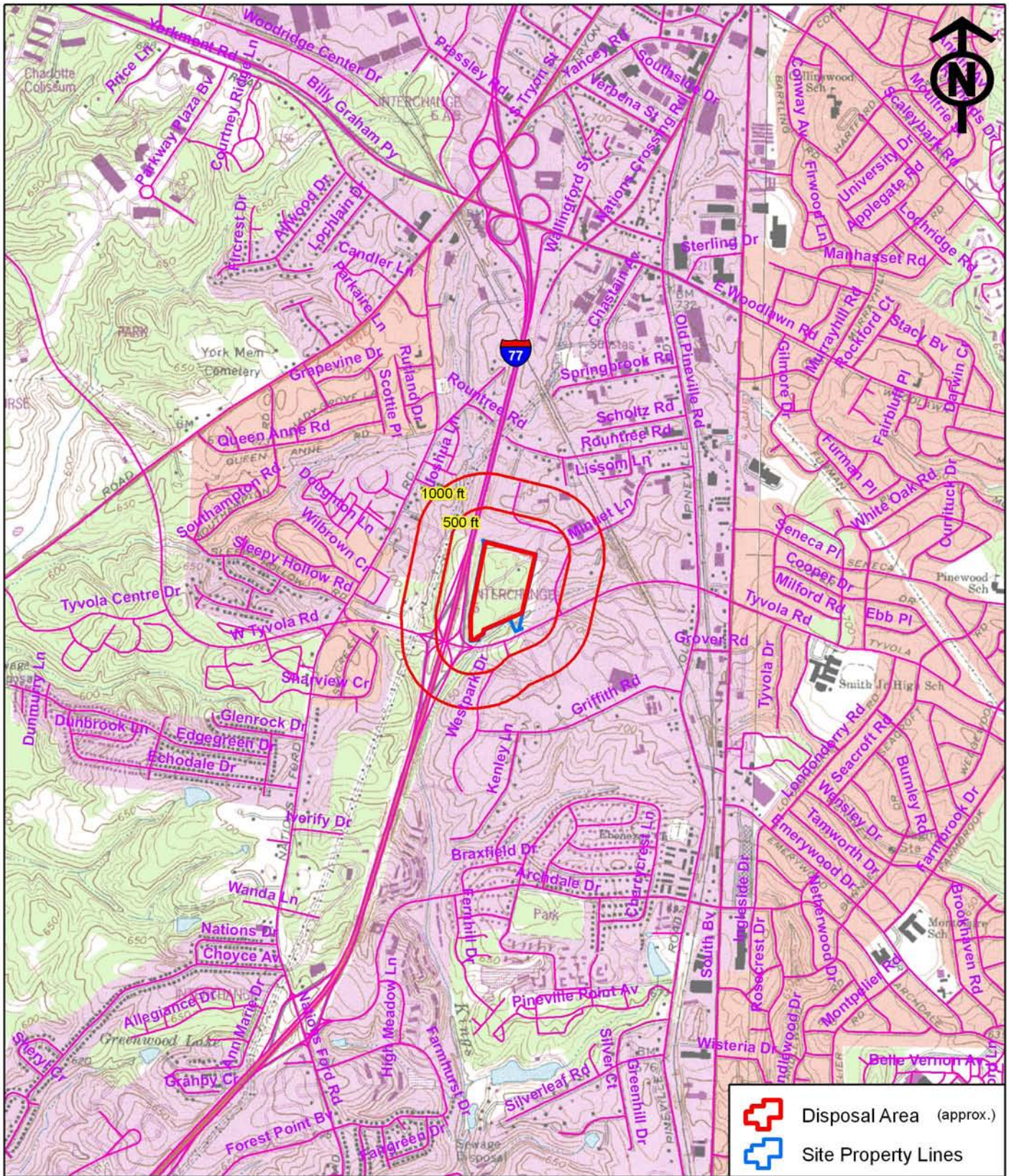
Point	State Plane Coordinates (meters)		Latitude (deg, min, sec)	Longitude (deg, min, sec)
	Northing	Easting	N	W
<b>Points obtained using a WAAS enabled Thales Mobile Mapper</b>				
Site Entrance	158777	437848	35 9 59.8	80 53 8.2
P-1	158519	437788	35 9 51.4	80 53 10.4
P-2	158401	437565	35 9 47.5	80 53 19.2
P-3	158500	437560	35 9 50.7	80 53 19.4
P-4	158831	437629	35 10 1.5	80 53 16.9
P-5	158446	437620	35 9 49.0	80 53 17.0
P-6	158428	437615	35 9 48.4	80 53 17.2
P-7	158413	437592	35 9 47.9	80 53 18.1
P-8	158405	437593	35 9 47.6	80 53 18.0

Notes:

- 1) Points are on the Disposal Area Perimeter.
- 2) Points obtained during site visit using a WAAS enabled Thales Mobile Mapper, and based on interpretation of aerial photographs, and property boundaries.
- 3) All points in NAD83 datum.



# FIGURES



Source: 1. USGS 7.5' Quadrangle, Charlotte West NC, 1993  
 Topography Based on Aerial Photos Taken 1965  
 Contour Intervals = 10 ft

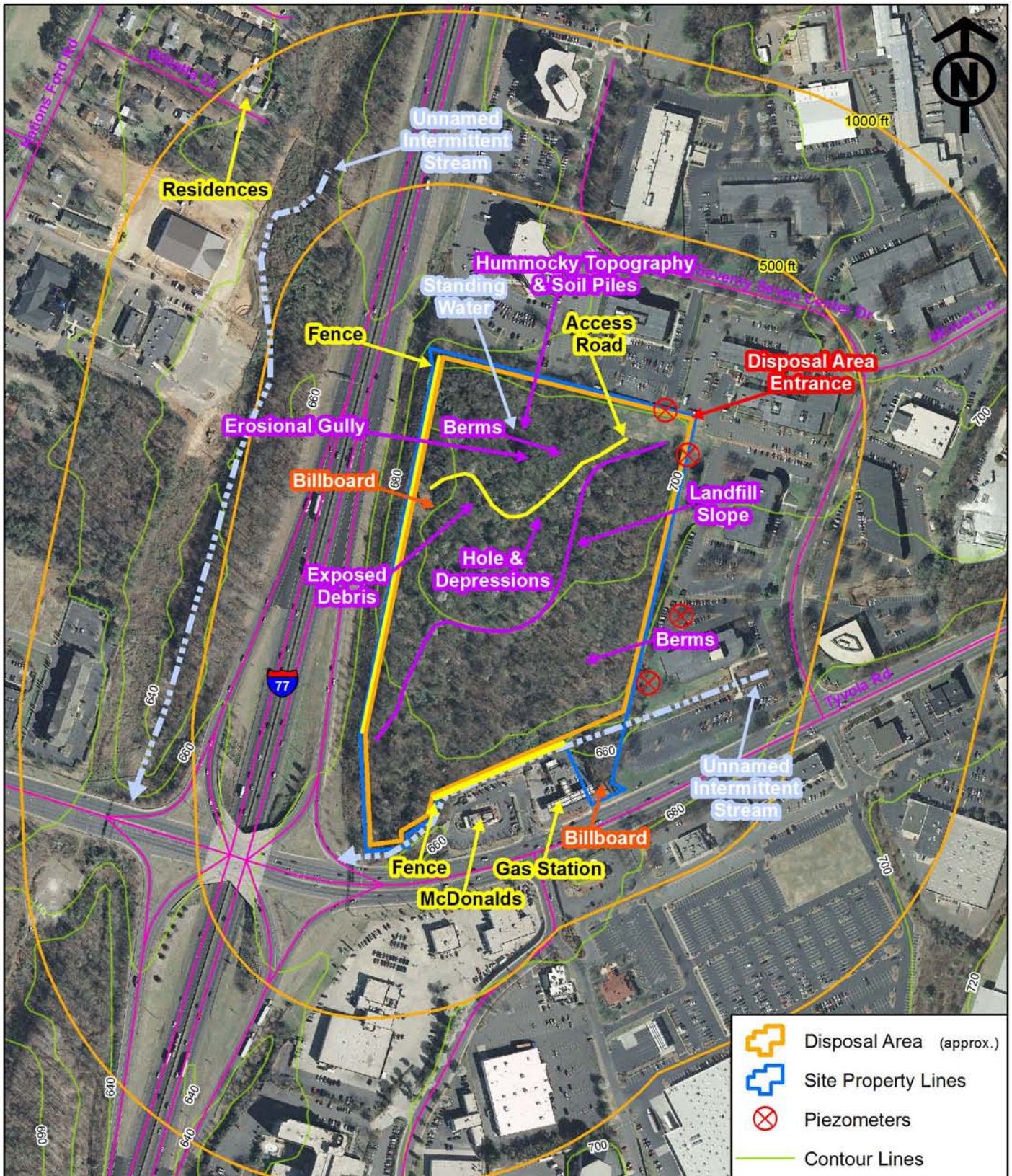


NCDENR  
 OLD LANDFILL ASSESSMENT

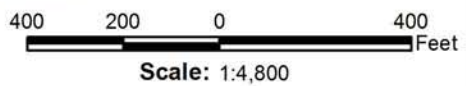
Old Charlotte Landfill/  
 Vanguard Center NONCD0001065  
 Mecklenburg County, NC

USGS TOPOGRAPHIC MAP

Figure 1



Source: 1. Mecklenburg County, NC, GIS Department  
[ftp://ftp1.co.mecklenburg.nc.us/luesa/mapping\\_gisdata/GEObASE/](ftp://ftp1.co.mecklenburg.nc.us/luesa/mapping_gisdata/GEObASE/)  
 2. Contours, 20 ft, NCDOT GIS Branch, March 10, 2005



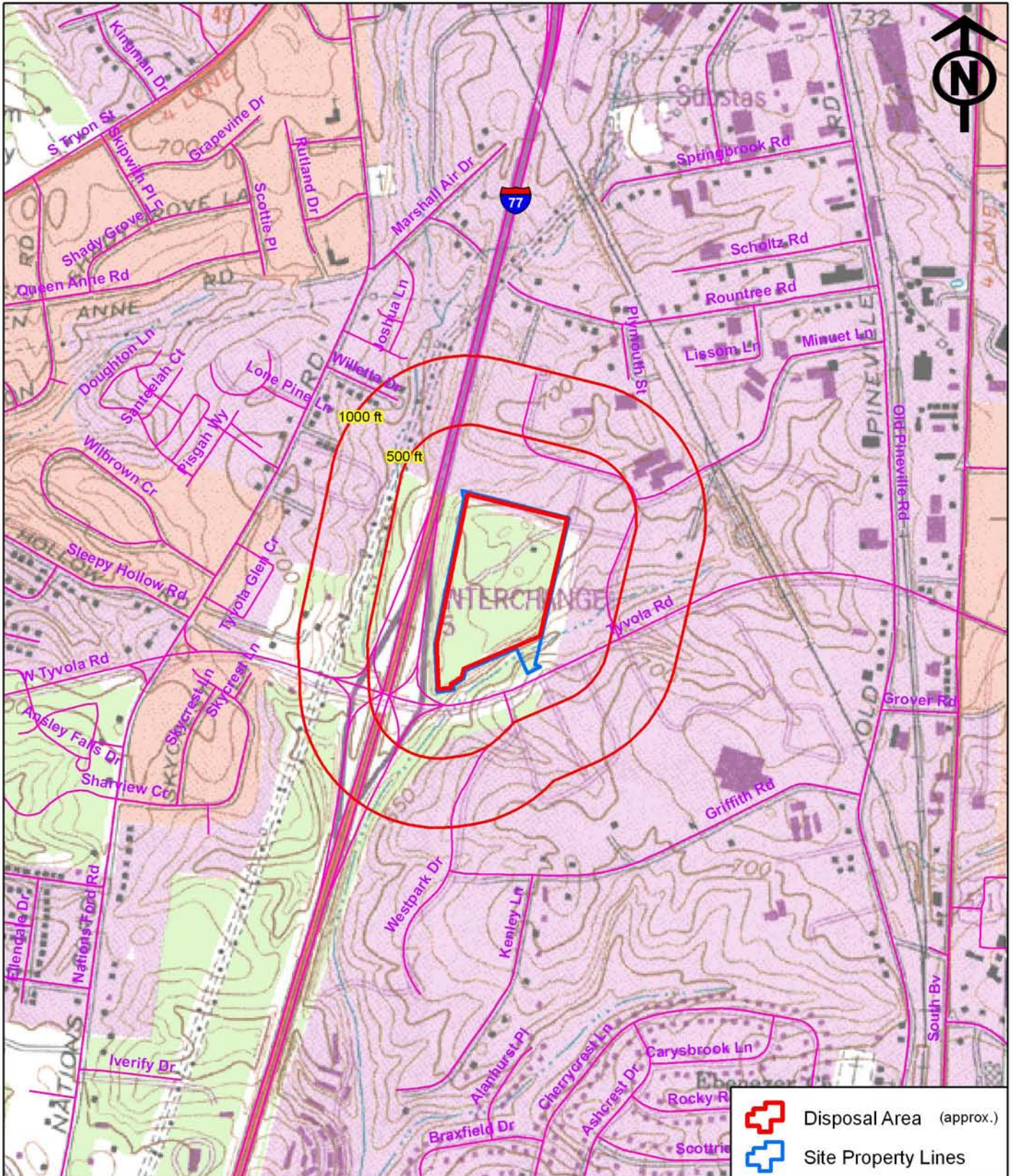
-  Disposal Area (approx.)
-  Site Property Lines
-  Piezometers
-  Contour Lines



NCDENR  
 OLD LANDFILL ASSESSMENT  
 Old Charlotte Landfill/  
 Vanguard Center NONCD0001065  
 Mecklenburg County, NC



SITE MAP

Figure 2



Source: 1. USGS 7.5' Quadrangle, Charlotte West NC, 1993  
 Topography Based on Aerial Photos Taken 1965  
 Contour Intervals = 10 ft

1,000 500 0 1,000  
 Feet  
 Scale: 1:12,000

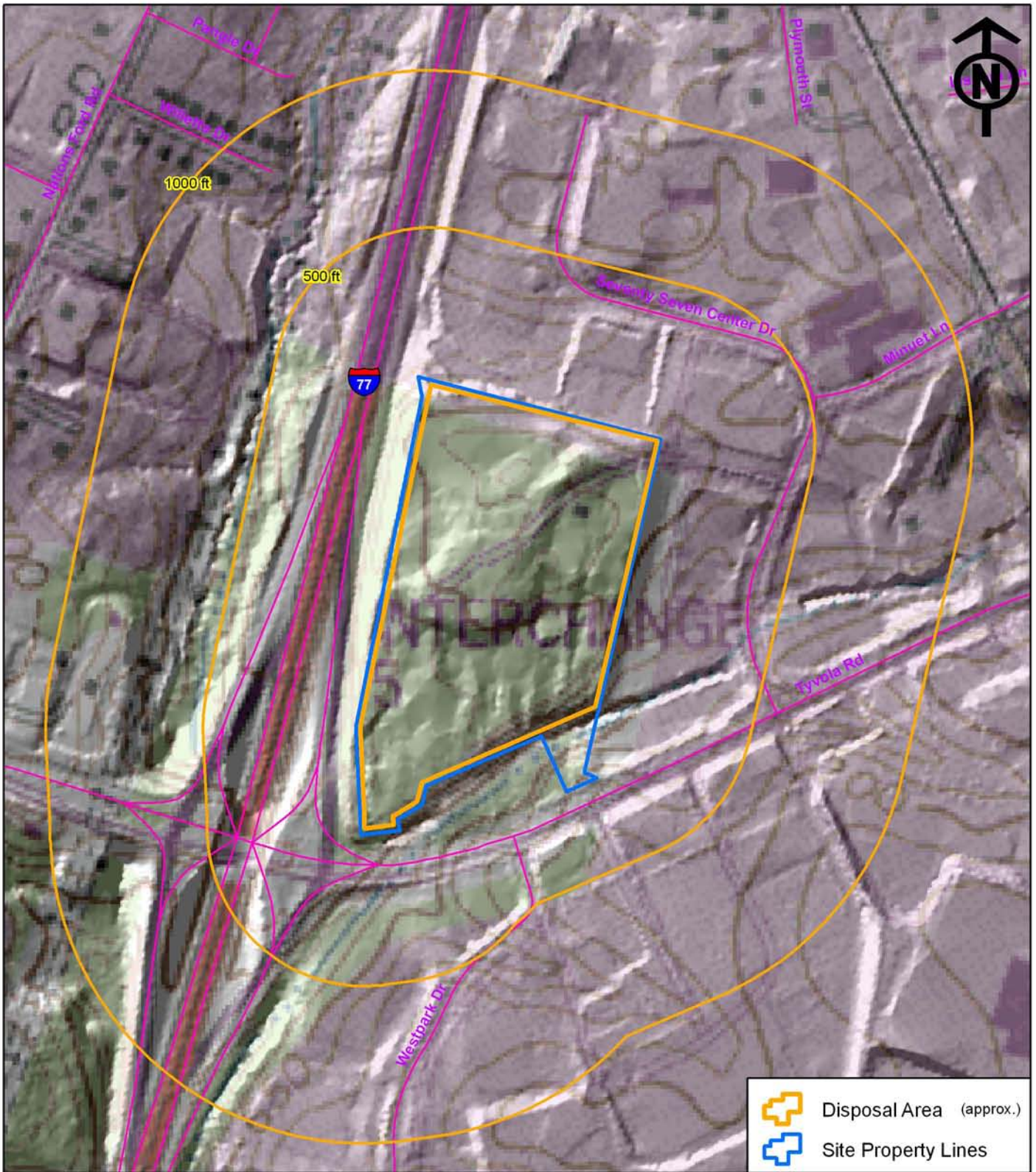
 Disposal Area (approx.)  
 Site Property Lines



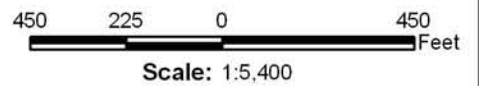
NCDENR  
 OLD LANDFILL ASSESSMENT  
 Old Charlotte Landfill/  
 Vanguard Center NONCD0001065  
 Mecklenburg County, NC

VICINITY MAP

Figure 3



**Source:** 1. USGS 7.5' Quadrangle, Charlotte West NC, 1993  
 Topography Based on Aerial Photos Taken 1965  
 Contour Intervals = 10 ft  
 2. Bare Earth LiDAR, Mecklenburg County NC,  
 NC Floodplain Mapping (8/17/05)

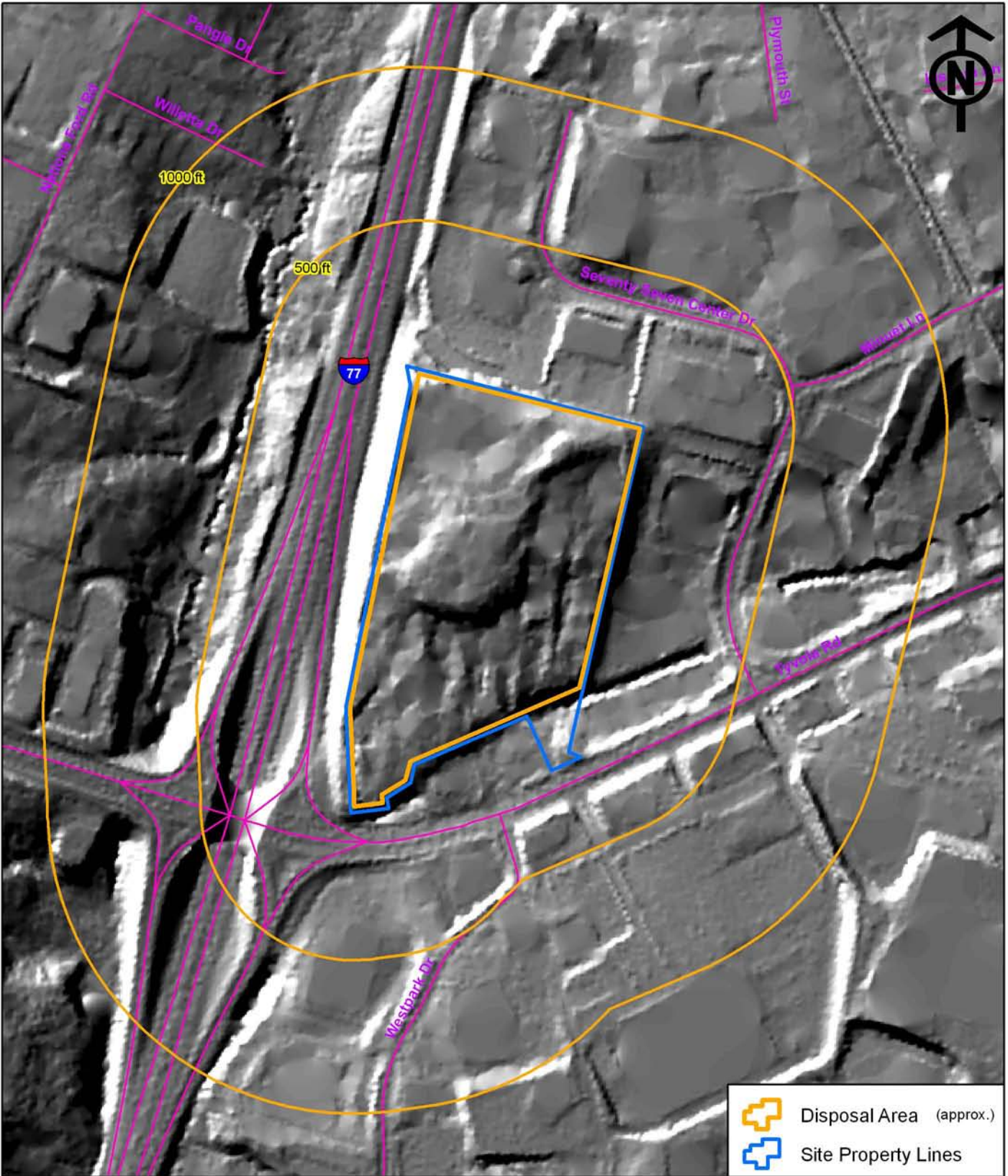


NCDENR  
 OLD LANDFILL ASSESSMENT

Old Charlotte Landfill/  
 Vanguard Center NONCD0001065  
 Mecklenburg County, NC

TOPOGRAPHIC MAP  
 OVERLAID ON LiDAR  
 SHADED RELIEF



Figure 4



Source: 1. Bare Earth LiDAR, Mecklenburg County NC,  
NC Floodplain Mapping (8/17/05)

450 225 0 450  
Feet

Scale: 1:5,400

-  Disposal Area (approx.)
-  Site Property Lines



NCDENR  
OLD LANDFILL ASSESSMENT  
Old Charlotte Landfill/  
Vanguard Center NONCD0001065  
Mecklenburg County, NC

LiDAR SHADED RELIEF

Figure 5

APPENDIX A  
FIELD RECONNAISSANCE SHEET

# NCDENR Old Landfill Assessment

## FIELD RECONNAISSANCE SHEET

Site visit performed by: Sue Mickiewicz + Cameron Crenshaw  
Date and time: 6/30/10, 2:00pm  
Weather: Rainy, Cloudy, 80°  
Escort (with title and organization): No Escort  
Project Task No. Schnabel Project No.: 06210002.30

### Site Information

(Site Area: The property or properties on which the Disposal Area is located. If the Disposal Area boundary cannot be identified, then the Site Area and Disposal Area boundaries are the same.)

↖	NCDENR ID No.	Old Charlotte Landfill/Vanguard Center
	Site Name:	NONCD0001065
	Site Address:	TYNOLA ROAD and I-77 Exit 5
	County:	Mecklenburg
	Owner address:	Stone Bridge Associates, Mr. Kent Mangus
→	Owner phone number:	4733 Bethesda Avenue, Suite 800 Bethesda, Maryland 20814 301-913-8610

### On-Site Structures for Site Area including Disposal Area

Any buildings located onsite? Y or N Approximate age of building(s) \_\_\_\_\_

Location of building(s) \_\_\_\_\_

Building utilization (i.e. residential, retail store, barn, etc.) \_\_\_\_\_

Is building on a slab or is it a raised foundation with a crawl space? \_\_\_\_\_

Is there a water supply well at or near the building? \_\_\_\_\_

Are there any indications of former onsite buildings? NO

Any evidence of human activity? Y or N Describe in detail: \_\_\_\_\_

Recent Dumping, Bill Board, Road to Billboard,  
monitoring wells along boundary of Site, recent trash Disposal,  
No Trespassing Signs on South Side of Site



**Current Use of Site and Disposal Areas**

What is the current use of the site (residential, church, daycare, school, business, agricultural, etc.)?

Not in Use, Road to Billboard on Western part of Site

What is the ground cover (grass, scrub trees, large trees, pasture, agricultural field, bare ground)?

Deciduous trees 3-12 inches in Diameter, vines, briars, leaves cover ground, tall grasses, kudzu, bare ground

**Available utilities on site and location:**

Utility	Provided by	Location of Utility
Electricity Y or N		
Natural Gas Y or N		
Water Y or N		
Sewer Y or N		
Solid Waste Y or N		

On-Site Water Wells		
Well Number	Location	Working or Abandoned
Water Well(s)		

5 piezometers observed along NE boundary of Site

DRAINAGES				
Location	Width (ft)	Stream Bed*	Flow*	Water Quality*
SE corner	10ft	Sand/boulders	fast flow	Cloudy
		*Mud, Sand, Gravel, Boulders, Combination	*Standing Water, Slow Flow, Fast Flow	*Clear, Cloudy, Muddy

STANDING WATER				
Location	Approx Size	Type*	Natural or Modified Topography?	Water Quality*
NW	20'x20'	Poor Drainage Standing Water	Modified	Cloudy
		*Swamp, Poor Drainage, Lake, Pond		*Clear, Cloudy, Muddy

General topography of the site (which way does surface water flow)?:

SW

### DISPOSAL AREA

(Disposal Area: The area observed or reported to have been used for waste placement or burial. The perimeter of this area is the observed limit of waste material based on field observations, or the inferred limit base on a review of historical aerial photographs.)

DISPOSAL AREA BOUNDARY				
Perimeter	Boundary Type	Visibility	Water Discharge?	Water Quality
Northern	Commercial Buildings	Visible	Standing water	Cloudy
Southern	Commercial Buildings	Visible	Fast Flowing	Cloudy
Eastern	Commercial Buildings	Visible		
Western	I-77	Visible		
	Wooded, Pasture, Residential, Creek, etc.	Clearly Visible, Visible, Difficult to Identify, Not Found	Seep, Standing Water, Flowing Water	Clear, Cloudy, Muddy

### Disposal Area:

Names of adjacent roads: Tyvola Road, Interstate 77

Access to Disposal Area: Northeast corner from Commercial building parking lot

General slope and topography of Disposal Area: SW

## Disposal Area Conditions

Describe the feature and location of any of the conditions observed. Take photographs of observed features. Note if feature not observed.

Disposal Area Ground Cover (grass, trees (include diameter), bushes, waste, litter, dirt, rock):

trees → Deciduous 3-12 inches in Diameter, trash, Rocks  
briars, vines, leaves, bare ground, kudzu, tall grasses

Erosion: erosional gullies (small ~ 2-4 inches wide)

Cemetery: None

Slope failure: None

Seeps: None

Odor: None

Stained Soil: None

Evidence of waste deposition based on topographic changes (depressions, holes, hummocky, piles of soil, berms):

holes, berms, soil piles, hummocky topography, depressions

Exposed Debris: tires, scrap metal, plastic bottles, glass bottles, cans, insulation, bricks, concrete, 55-gallon drums, paint can, plastic, pipes, garden hoses, plastic plant pots

Physical Barriers at Disposal Area Boundary: <sup>metal</sup> fence along southern boundary, wood/wire fence along western boundary

Potential Landfill Gas Migration Pathways: holes, piezometers, electricity

Physical barriers to Site Area: fences along south + west of site, thick kudzu + briars, steep slopes

Physical barriers to Disposal Area: None

Evidence of Human Activity: Recent Dumping, billboard, road

**Other site information which will help NCDENR prioritize the site:**

Since the site was closed, the site area and disposal area have been used by whom and for what purpose?

Not Used, overgrown -> covered in trees  
Road to billboard

**Vicinity Conditions**

**Vicinity Area: The area within 1,000 feet of the perimeter of the Disposal Area.**

**Adjacent and Adjoining Properties (note for ALL properties adjoining within 1,000 ft of perimeter of the Disposal Area):**

Describe structure(s) on adjacent properties that have a shared property boundary with the Site.

Commercial Park - office buildings  
McDonalds, Gas Station, I-77

Are there fire hydrants and/or water meters present within 500 feet of the site? (Y) or N

Describe: \_\_\_\_\_

Are there fire hydrants and/or water meters present within 1,000 feet of the site? (Y) or N

Current Land Usage in Vicinity		
Direction	Description (i.e. wooded, residential, commercial)	Topographically Upgradient or Downgradient
North	Business Park	Up-gradient
South	McDonald's, Gas station, Tyvola Rd	Down-gradient
East	Business Park	Down-to cross-gradient
West	Interstate 77	Down-to cross-gradient

Describe properties in detail. Are they gasoline stations, industry, dry cleaners, landfills, junk yards, residences, office buildings, etc.?

Commercial Park - office buildings  
McDonalds, Gas Station, I-77

Land use of the surrounding area as a whole: Commercial, Residential, Agricultural, Industrial, or Wooded (Circle answer)

**Surface Water Features:**

Are there any surface water bodies (i.e. ponds, creeks, swamps, lagoons) within 500 or 1,000 feet of the site? Y or N Describe:

Intermittent Stream -> SE corner of site + to the west of the site ~500ft away

**Photos**

Photos to be taken of:


	( ✓ )
Entrance to Site Area (property that Disposal Area is on)	✓
Site Area	✓
Disposal Area	✓
Facing north from northern perimeter	✓
Facing south from southern perimeter	✓
Facing east from eastern perimeter	✓
Facing west from western perimeter	✓
Any onsite surface water bodies or stream beds (note location in appropriate section)	✓
Any important onsite conditions (debris, buildings, utilities, etc and note location)	✓
Any important offsite conditions (debris, wells, surface water, etc. and note location)	✓

APPENDIX B  
TAX RECORDS

**Mecklenburg County, North Carolina  
POLARIS**

**Parcel Ownership and GIS Summary**

Date and Time: 7/2/2010 3:33:55 PM

<b>Parcel ID #: 16911105 GIS ID #: 16911105</b>		<b>FEMA Flood Information</b>	
Owner Name:	SEVENTY-SEVEN LAND CO AND % STONEBRIDGE ASSOCIATES AND ATT: KENT MARGUIS	FEMA Panel #:	3710453200J
Mailing Address:	4733 BETHESDA AVE #800 BETHSEDA, MD 20814	FEMA Flood Zone:	OUT
<b>Property Characteristics</b>		FEMA Panel Date:	03/02/2009
Legal Desc.:	NA	<b>Community Flood Information</b>	
Land Area:	20.95AC	Community Flood Zone:	OUT
Fire District:	00-CITY OF CHARLOTTE	<b>Regulated Watershed Information</b>	
Special District:	N/A	Watershed Name:	SUGAR
Account Type:	NC CORP	Watershed Class:	
Municipality:	1-CHARLOTTE	<p align="center"><b>Powered by</b></p> 	
Property Use:	VACANT		
<b>Deed Reference(s) and Sales Price</b>			
04317-990 (7/7/1980) \$0.00			
<b>Situs Addresses Tied to This Parcel</b>			
409 TYVOLA RD			
<b>Site Location Information</b>			
Zoning Boundaries:	Contact Appropriate Planning Department or See Map.		
ETJ Area:	CHARLOTTE		
Charlotte Historic Districts:	NO		
Within Charlotte 6/30/2009 Annexation Area:	NO		
Census Tract #:	38.04		
<b>Parcel Falls Inside a Water Quality Buffer?: YES</b>			
<b>Post Construction District</b>			
Jurisdiction:	Charlotte		
District:	Central Catawba		

The information provided by this program is prepared for the inventory of real property within Mecklenburg County and is compiled from recorded deeds, plats, tax maps, surveys, and other public records and data. Users of this map data are hereby notified that the aforementioned public primary information sources should be consulted for verification of the information. Mecklenburg County and its mapping contractors assume no legal responsibility for the information contained herein.

Mecklenburg County, North Carolina

**POLARIS**

Property Ownership Land Records Information System

Date Printed: Fri Jul 2 15:31:48 EDT 2010



This map is prepared for the inventory of real property within Mecklenburg County and is compiled from recorded deeds, plats, tax maps, surveys, planimetric maps, and other public records and data. Users of this map are hereby notified that the aforementioned public primary information sources should be consulted for verification. Mecklenburg County and its mapping contractors assume no legal responsibility for the information contained herein.



APPENDIX C  
RECORDS OF COMMUNICATION  
SITE VISIT PERMISSION LETTER



June 15, 2010

Stonebridge Associates  
Mr. Kent Marquis  
4733 Bethesda Avenue, Suite 800  
Bethesda, Maryland 20814

Dear Mr. Marquis:

The North Carolina Department of Environment and Natural Resources (NCDENR) has hired Schnabel Engineering South, PC (Schnabel) to assess old unlined landfills in several North Carolina counties. This project consists of researching the past use and current conditions of hundreds of sites.

Your property at 409 Tyvola Road in Charlotte (Parcel ID#16911105) has been identified as a potential location of one of these old unlined landfills. We would like to visit your property and ask questions related to the history of the property to help prepare a report for the NCDENR. During the site visit, our staff would walk over the property to observe the current conditions. No sampling or digging would be performed. After our site visit, we will prepare a report and submit it to NCDENR.

During the next few days one of our staff will be calling you to answer any questions you might have and to request permission to visit your property. If you have questions prior to our call, feel free to call me at the phone number listed below. If you call after business hours or during the weekend, please leave me a message.

If you have general questions about the program you may also contact the NCDENR staff listed on the attached letter.

Thank you for your assistance.

Sincerely,

**SCHNABEL ENGINEERING SOUTH, PC**

A handwritten signature in blue ink that reads "Misti S. Benchabbat".

Misti S. Benchabbat  
Project Scientist

GR/MB

Attachment: Property Owner Letter from NCDENR  
NONCD 0001065

cc: Bruce Lefler, NCDENR

C:\Documents and Settings\jhowell\Local Settings\Temporary Internet Files\Content.Outlook\5JC05G19\PropertyOwnerIntroLetter-StonebridgeAssociates-2010-06-15.doc



North Carolina Department of Environment and Natural Resources  
Division of Waste Management

Beverly Eaves Perdue  
Governor

Dexter R. Matthews  
Director

Dee Freeman  
Secretary

June 17, 2009

To: Property Owner

Re: Pre-Regulatory Landfill Assessments

The North Carolina Department of Environment and Natural Resources' Division of Waste Management (State) has been tasked with gathering information and accurately locating pre-regulatory landfills. The State is in the process of compiling a statewide inventory of these sites. Over 700 pre-regulatory landfills are currently included on a list maintained by the State.

The General Assembly has appropriated funding through Senate Bill 1492 to determine the location of these landfills and identify potential hazards to the public and the environment. After reviewing the information contained in the State's files, your property and/or a nearby property may have been used as a landfill in the past. The State requests permission to inspect your property to look for the disposal area and the presence of any hazards that may exist because of the property's past use as a landfill. Any cataloged landfills determined not to be present will be removed from the State's list.

Marshall Miller & Associates, Inc. and Schnabel Engineering South, P.C. have been contracted by the State to perform location research and inspection of these pre-regulatory landfill sites. This inspection is for information gathering purposes only. By granting permission you are not assuming responsibility for any hazards found.

If you have any questions, please contact me at (919) 508-8463.

Sincerely,

Bruce E. Lefler Jr., Hydrogeologist  
Pre-Regulatory Landfill Unit  
Inactive Hazardous Sites Branch, Superfund Section  
Division of Waste Management



**CONVERSATION RECORD**

<b>CONTACT:</b>	Keith Carpenter	<b>ORGANIZATION:</b>	City of Charlotte Engineering and Property Management	
<b>TITLE:</b>	City Engineer			
<b>ADDRESS:</b>	600 E. Fourth Street Charlotte, NC 28202	<b>DATE:</b>	June 14, 2010	
		<b>TIME:</b>	1415	
<b>PHONE:</b>	704-336-3650	<b>FAX:</b>		
<b>PROJECT NAME:</b>	NC DENR Old Unlined Landfill Assessment	<b>PROJECT NO.:</b>	06210002.30	
<b>SITE NAME:</b>	Old Charlotte LDFL/Vanguard Center	<b>NC DENR ID NO.:</b>	NONCD0001065	
<b>SUBJECT:</b>	Historical Information			
<b>SCHNABEL REP:</b>	Misti Benchabbat			
<input type="checkbox"/> INCOMING CALL	<input checked="" type="checkbox"/> OUTGOING CALL	<input type="checkbox"/> MESSAGE LEFT FOR CONTACT	<input type="checkbox"/> MESSAGE RECEIVED	<input type="checkbox"/> MEETING

REASON FOR INTERVIEW: City Engineer  
 PERMISSION GRANTED TO ACCESS PROPERTY: Not applicable  
 LOCATION OF LANDFILL: Tyvola Road and I-77  
 WHO OWNS THE LANDFILL PROPERTY: Privately owned  
 LIMITS OF LANDFILL: Part of it is under the business park  
 LANDFILL OPERATION DATES: Does not know dates but knows that it closed prior to 1970.  
 WHO PLACED WASTE IN LANDFILL: City of Charlotte  
 MATERIALS PLACED IN LANDFILL: Household  
 HOW WAS MATERIAL PLACED IN LANDFILL: Trench style landfill  
 AVAILABLE RECORDS: Does not know  
 PRESENT AND PRIOR LAND USE: Presently undeveloped and a portion is under the business park  
 PUBLIC OR PRIVATE WATER SUPPLY: Public water supply  
 OTHER CONTACTS: No additional contacts provided.  
 ADDITIONAL INFORMATION: Portions of the Disposal Area may have been removed during the construction of I-77.



**CONVERSATION RECORD**

<b>CONTACT:</b>	Joe Hack	<b>ORGANIZATION:</b>	Mecklenburg County Solid Waste Management
<b>TITLE:</b>	Contracted Operations Core Process Manager		
<b>ADDRESS:</b>	1007 Amble Dr Charlotte, NC	<b>DATE:</b>	June 14, 2010
		<b>TIME:</b>	1330
<b>PHONE:</b>	704-336-6513	<b>FAX:</b>	
<b>PROJECT NAME:</b>	NC DENR Old Unlined Landfill Assessment	<b>PROJECT NO.:</b>	06210002.30
<b>SITE NAME:</b>	Old Charlotte LDFL/Vanguard Center	<b>NC DENR ID NO.:</b>	NONCD0001065
<b>SUBJECT:</b>	Historical Information		
<b>SCHNABEL REP:</b>	Misti Benchabbat		
<input type="checkbox"/> INCOMING CALL	<input checked="" type="checkbox"/> OUTGOING CALL	<input type="checkbox"/> MESSAGE LEFT FOR CONTACT	<input type="checkbox"/> MESSAGE RECEIVED
			<input type="checkbox"/> MEETING

REASON FOR INTERVIEW: Solid Waste Management for Mecklenburg County  
 PERMISSION GRANTED TO ACCESS PROPERTY: Not applicable  
 LOCATION OF LANDFILL: Tyvola Road and I-77  
 WHO OWNS THE LANDFILL PROPERTY: Privately owned  
 LIMITS OF LANDFILL: Does not know  
 LANDFILL OPERATION DATES: Does not know dates but knows that it closed prior to 1970.  
 WHO PLACED WASTE IN LANDFILL: Does not know  
 MATERIALS PLACED IN LANDFILL: Does not know.  
 HOW WAS MATERIAL PLACED IN LANDFILL: Does not know  
 AVAILABLE RECORDS: Does not know  
 PRESENT AND PRIOR LAND USE: Does not know  
 PUBLIC OR PRIVATE WATER SUPPLY: Public water supply  
 OTHER CONTACTS: No additional contacts provided.  
 ADDITIONAL INFORMATION: Portions of the Disposal Area may have been removed during the construction of I-77.



**CONVERSATION RECORD**

<b>CONTACT:</b>	Doug Pierotti	<b>ORGANIZATION:</b>	City of Charlotte Engineering and Property Management	
<b>TITLE:</b>	City Engineer			
<b>ADDRESS:</b>	600 E. Fourth Street Charlotte, NC 28202	<b>DATE:</b>	June 16, 2010	
		<b>TIME:</b>	1000	
<b>PHONE:</b>	704-432-5212	<b>FAX:</b>		
<b>PROJECT NAME:</b>	NC DENR Old Unlined Landfill Assessment	<b>PROJECT NO.:</b>	06210002.30	
<b>SITE NAME:</b>	Old Charlotte Landfill/ Vanguard Center	<b>NC DENR ID NO.:</b>	NONCD0001065	
<b>SUBJECT:</b>	History of landfill			
<b>SCHNABEL REP:</b>	Misti Benchabbat			
<input checked="" type="checkbox"/> INCOMING CALL	<input type="checkbox"/> OUTGOING CALL	<input type="checkbox"/> MESSAGE LEFT FOR CONTACT	<input type="checkbox"/> MESSAGE RECEIVED	<input type="checkbox"/> MEETING

REASON FOR INTERVIEW: City engineer  
 PERMISSION GRANTED TO ACCESS PROPERTY: Not applicable.  
 LOCATION OF LANDFILL: Tyvola Road  
 WHO OWNS THE LANDFILL PROPERTY: Private company  
 LIMITS OF LANDFILL: Does not know  
 LANDFILL OPERATION DATES: Closed in the 1970s  
 WHO PLACED WASTE IN LANDFILL: City of Charlotte  
 MATERIALS PLACED IN LANDFILL: Does not know  
 HOW WAS MATERIAL PLACED IN LANDFILL: Does not know  
 WAS MATERIAL PLACED AFTER JANUARY 1, 1983: No  
 AVAILABLE RECORDS: Does not know.  
 PRESENT AND PRIOR LAND USE: Currently vacant.  
 PUBLIC OR PRIVATE WATER SUPPLY: Municipal water  
 OTHER CONTACTS: Does not know  
 ADDITIONAL INFORMATION: Does not know



**CONVERSATION RECORD**

<b>CONTACT:</b>	Kent Marquis	<b>ORGANIZATION:</b>	Stonebridge Associates
<b>TITLE:</b>	Principal		
<b>ADDRESS:</b>	4733 Bethesda Avenue, Ste 800 Bethesda, Maryland 20814	<b>DATE:</b>	June 28, 2010
		<b>TIME:</b>	1000
<b>PHONE:</b>	301-913-8610	<b>FAX:</b>	301-913-9615
<b>PROJECT NAME:</b>	NC DENR Old Unlined Landfill Assessment	<b>PROJECT NO.:</b>	06210002.30
<b>SITE NAME:</b>	Old Charlotte LDFL/ Vanguard Center	<b>NC DENR ID NO.:</b>	NONCD0001065
<b>SUBJECT:</b>	Permission to access property		
<b>SCHNABEL REP:</b>	Misti Benchabbat		
<input type="checkbox"/> INCOMING CALL	<input checked="" type="checkbox"/> OUTGOING CALL	<input type="checkbox"/> MESSAGE LEFT FOR CONTACT	<input type="checkbox"/> MESSAGE RECEIVED
			<input type="checkbox"/> MEETING

REASON FOR INTERVIEW: Property Owner  
 PERMISSION GRANTED TO ACCESS PROPERTY: Yes  
 LOCATION OF LANDFILL: Within the perimeter of the parcel.  
 WHO OWNS THE LANDFILL PROPERTY: Stonebridge Associates  
 LIMITS OF LANDFILL: Within the perimeter of the parcel.  
 LANDFILL OPERATION DATES: Decommissioned in 1962  
 WHO PLACED WASTE IN LANDFILL: Does not know.  
 MATERIALS PLACED IN LANDFILL: Household debris. Mr. Marquis was told by different people that the local chicken processing plant disposed of chicken parts in the landfill, but he was also told that that was not true.  
 HOW WAS MATERIAL PLACED IN LANDFILL: Does not know  
 WAS MATERIAL PLACED AFTER JANUARY 1, 1983: Does not know.  
 AVAILABLE RECORDS: Does not know.  
 PRESENT AND PRIOR LAND USE: Does not know what the site was prior to being a landfill. Now the site is not being used for any purpose because of the landfill.  
 PUBLIC OR PRIVATE WATER SUPPLY: Adjacent business park owned by Stonebridge Associates is on public water.  
 OTHER CONTACTS: Does not know.  
 ADDITIONAL INFORMATION: Mr. Marquis stated that there are monitoring wells at the Site. Stonebridge Associates has not had them sampled.

APPENDIX D  
SITE PHOTOGRAPHS





<p><b>PHOTOGRAPH No.: 1</b></p> <p><b>Photo Taken: 06-30-10</b></p>
<p>LOCATION:</p>
<p>Site and Disposal Area entrance south of Seventy- Seven Center Drive.</p>
<p>COMMENTS:</p>
<p>Photo taken facing toward the south along the eastern perimeter of the Disposal Area.</p>



<p><b>PHOTOGRAPH No.: 2</b></p> <p><b>Photo Taken: 06-30-10</b></p>
<p>LOCATION:</p>
<p>Site and Disposal Area entrance south of Seventy- Seven Center Drive.</p>
<p>COMMENTS:</p>
<p>Photo taken facing toward the west along the northern perimeter of the Disposal Area.</p>



<b>PHOTOGRAPH No.: 3</b> <b>Photo Taken: 06-30-10</b>
<b>LOCATION:</b> Northern part of Disposal Area.
<b>COMMENTS:</b> Access road which leads to a billboard located on the west central part of the Disposal Area.



<b>PHOTOGRAPH No.: 4</b> <b>Photo Taken: 06-30-10</b>
<b>LOCATION:</b> Northern portion of Disposal Area.
<b>COMMENTS:</b> Concrete blocks and blue plastic tarp.



<b>PHOTOGRAPH No.: 5</b>
<b>Photo Taken: 06-30-10</b>
LOCATION:
Northern part of Disposal Area.
COMMENTS:
Recent trash disposal consisting of plastic bottles, cans, and glass bottles.



<b>PHOTOGRAPH No.: 6</b>
<b>Photo Taken: 06-30-10</b>
LOCATION:
Northern portion of Disposal Area.
COMMENTS:
Photo taken facing toward the east. Dense vines and shrub growth in Disposal Area.



<b>PHOTOGRAPH No.: 7</b>
<b>Photo Taken: 06-30-10</b>
LOCATION:
North central part of Disposal Area.
COMMENTS:
Black plastic plant pots on landfill slope. Landfill slope approximately 5 feet high.



<b>PHOTOGRAPH No.: 8</b>
<b>Photo Taken: 06-30-10</b>
LOCATION:
North central part of Disposal Area.
COMMENTS:
Scrap metal, rusted 55-gallon drums, brick, broken concrete, and plastic materials.



<b>PHOTOGRAPH No.: 9</b>
<b>Photo Taken: 06-30-10</b>
LOCATION:
North central part of Disposal Area.
COMMENTS:
Broken pieces of concrete. Holes visible in the landfill slope between the pieces of concrete. Landfill slope approximately 5 feet high.



<b>PHOTOGRAPH No.: 10</b>
<b>Photo Taken: 06-30-10</b>
LOCATION:
North central part of Disposal Area.
COMMENTS:
PVC pipes and rusted paint can.



<b>PHOTOGRAPH No.: 11</b>
<b>Photo Taken: 06-30-10</b>
LOCATION:
Northwestern part of Disposal Area.
COMMENTS:
Standing water approximately 20 feet by 20 feet. Water was cloudy at the time of the site visit.



<b>PHOTOGRAPH No.: 12</b>
<b>Photo Taken: 06-30-10</b>
LOCATION:
Northwestern part of Disposal Area.
COMMENTS:
Hummocky topography and dense vine covers the ground surface.



<b>PHOTOGRAPH No.: 13</b>
<b>Photo Taken: 06-30-10</b>
LOCATION:
Northwestern part of Disposal Area.
COMMENTS:
Hole approximately two feet by two feet and 1 foot deep.



<b>PHOTOGRAPH No.: 14</b>
<b>Photo Taken: 06-30-10</b>
LOCATION:
Northwestern part of Disposal Area.
COMMENTS:
Small erosional gully approximately two to four inches wide and one foot deep.



<b>PHOTOGRAPH No.: 15</b>
<b>Photo Taken: 06-30-10</b>
LOCATION:
Southern part of site along eastern boundary of Disposal Area.
COMMENTS:
Dense kudzu and deciduous trees.



<b>PHOTOGRAPH No.: 16</b>
<b>Photo Taken: 06-30-10</b>
LOCATION:
Along eastern boundary of Disposal Area.
COMMENTS:
Piezometer with unlocked well cap.



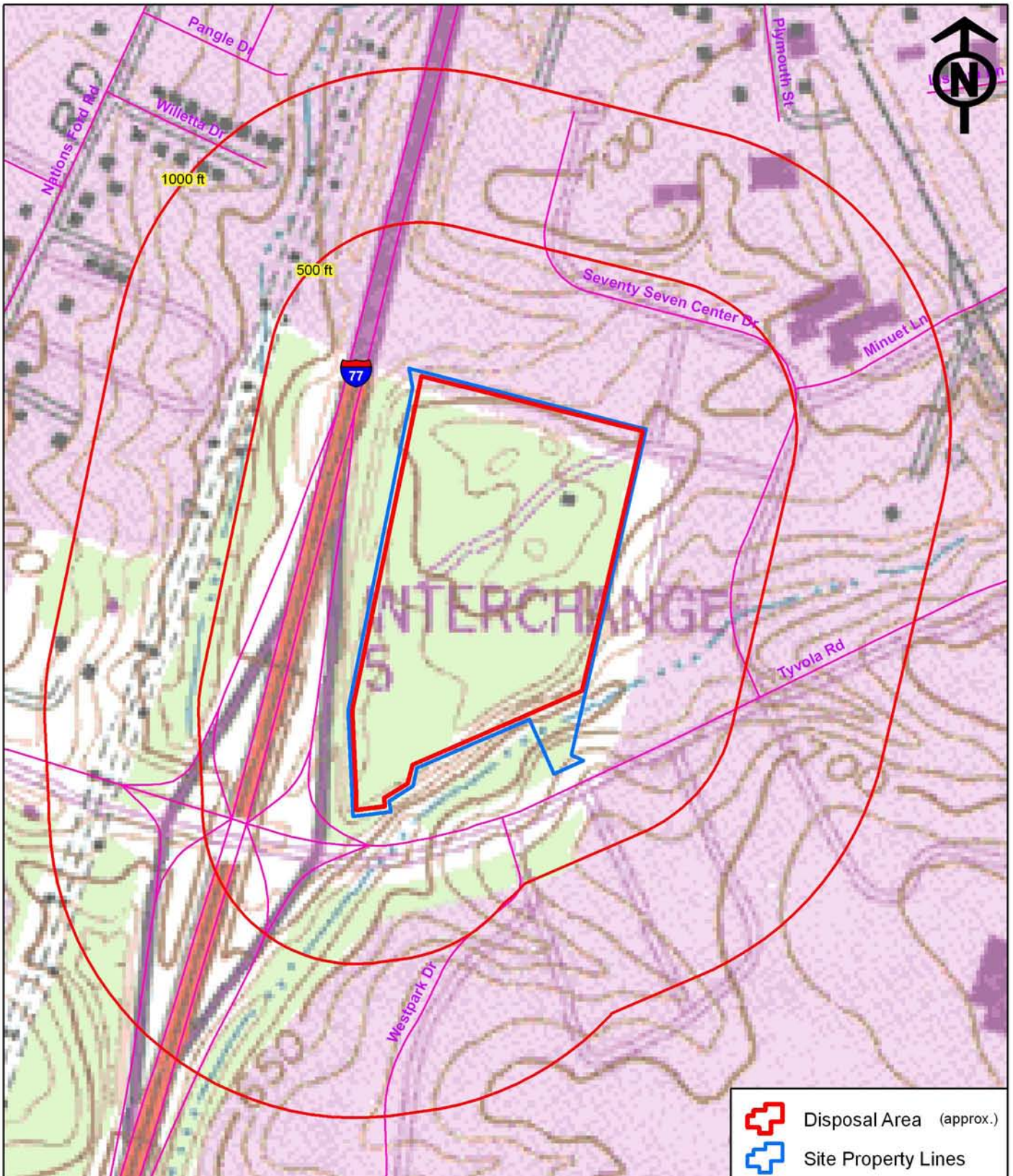


<b>PHOTOGRAPH No.: 17</b> <b>Photo Taken: 06-30-10</b>
<b>LOCATION:</b> Southern part of Disposal Area.
<b>COMMENTS:</b> Unnamed intermittent stream approximately 10 feet wide with cloudy water at the time of the site visit.

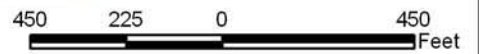


<b>PHOTOGRAPH No.: 18</b> <b>Photo Taken: 06-30-10</b>
<b>LOCATION:</b> Southern part of Disposal Area.
<b>COMMENTS:</b> "No Trespassing" sign and recent dumping of trash on the Disposal Area.

APPENDIX E  
AERIAL PHOTOGRAPHS



Source: 1. USGS 7.5' Quadrangle, Charlotte West NC, 1993  
 Topography Based on Aerial Photos Taken 1965  
 Contour Intervals = 10 ft



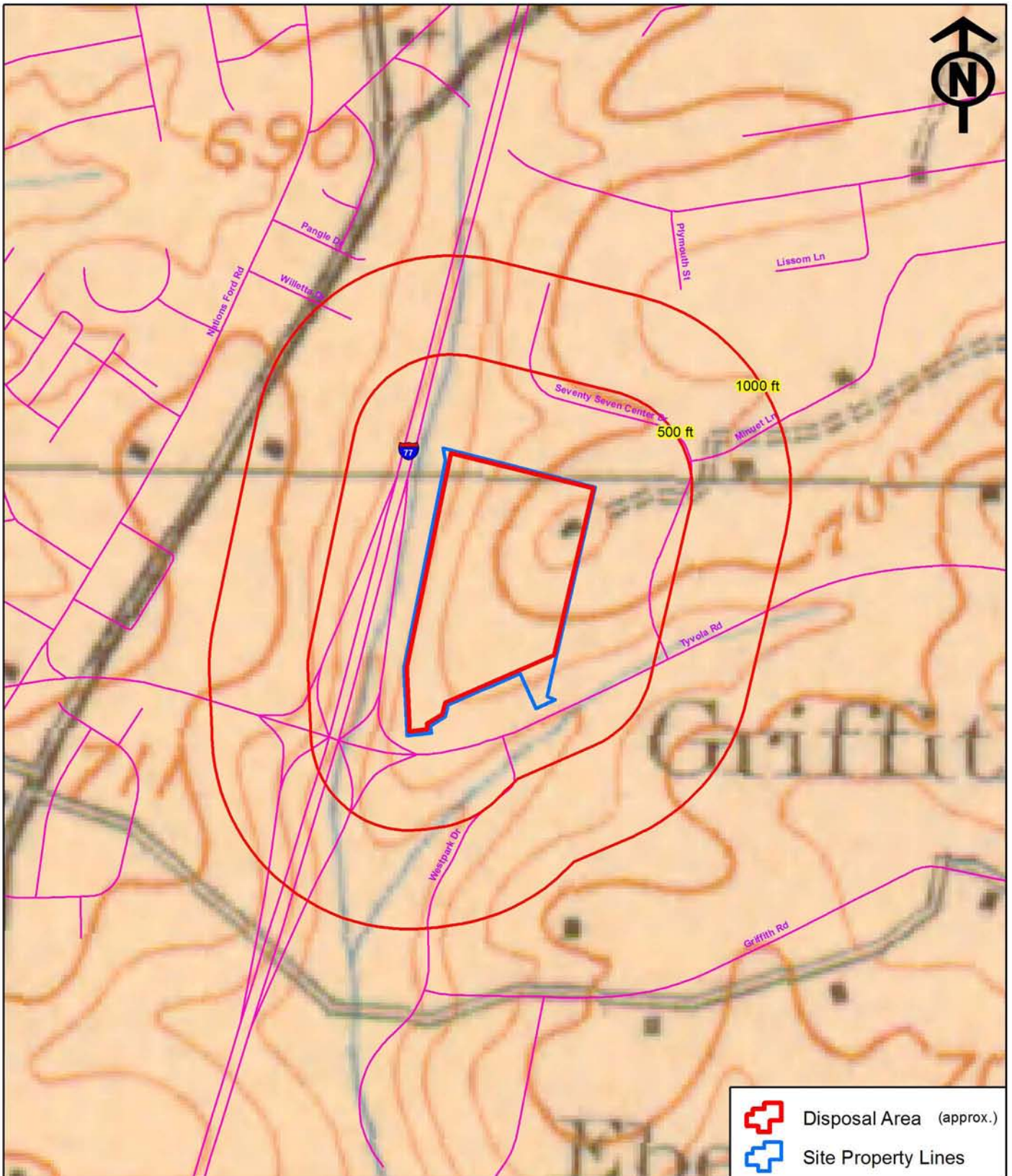
Scale: 1:5,400



NCDENR  
 OLD LANDFILL ASSESSMENT  
 Old Charlotte Landfill/  
 Vanguard Center NONCD0001065  
 Mecklenburg County, NC

TOPOGRAPHIC MAP AT  
 AERIAL PHOTO SCALE

Figure E-1



Source: 1. USGS 7.5' Quadrangle, Charlotte NC, 1907  
Contour Intervals = 20 ft

700 350 0 700  
Feet

Scale: 1:8,400

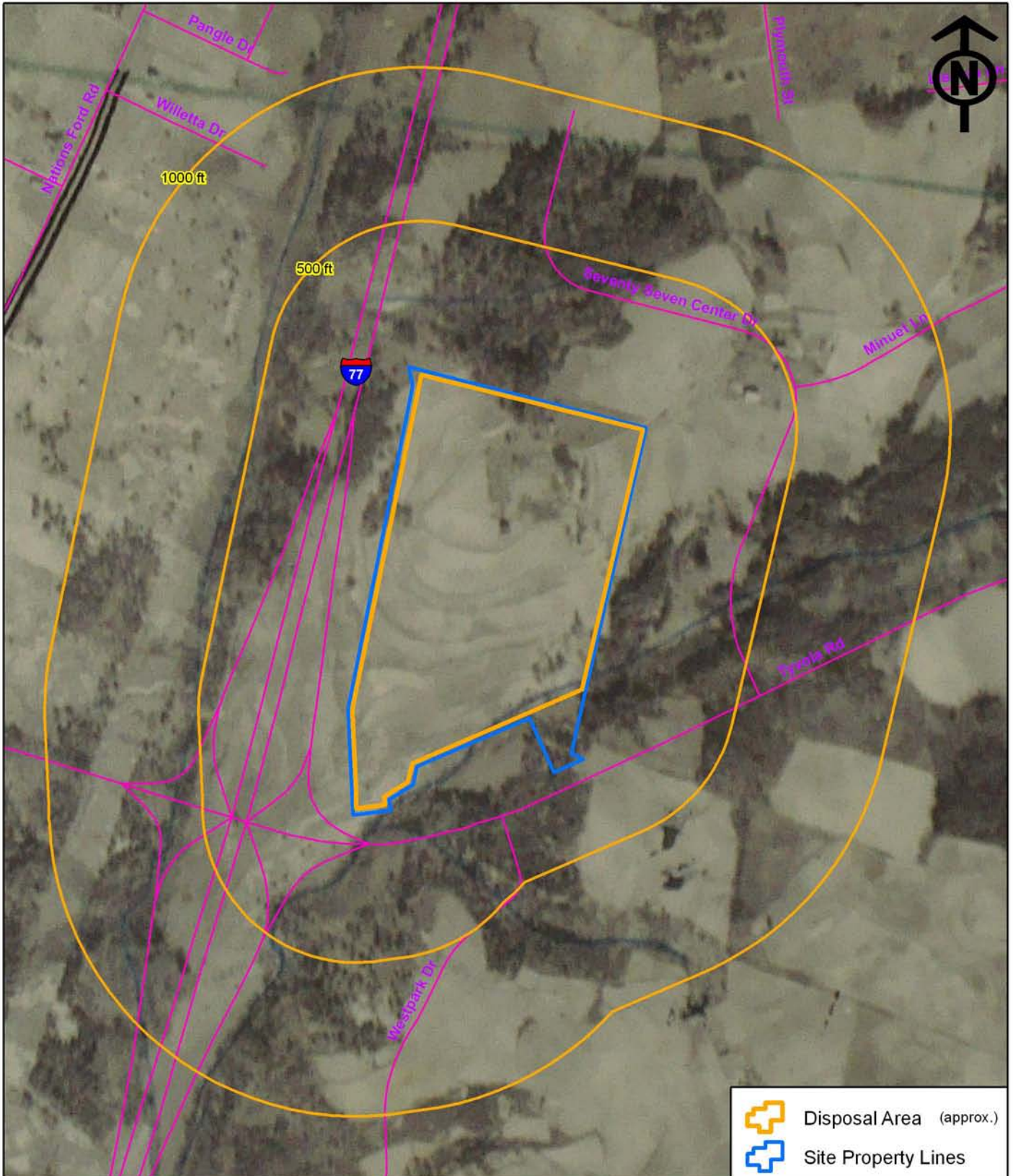


NCDENR  
OLD LANDFILL ASSESSMENT

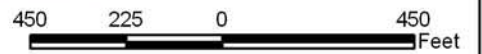
Old Charlotte Landfill/  
Vanguard Center NONCD0001065  
Mecklenburg County, NC

USGS TOPOGRAPHIC MAP

Figure E-1A



Source: 1. Mecklenburg County  
Soil and Water Conservation District  
(USDA NRCS)



Scale: 1:5,400

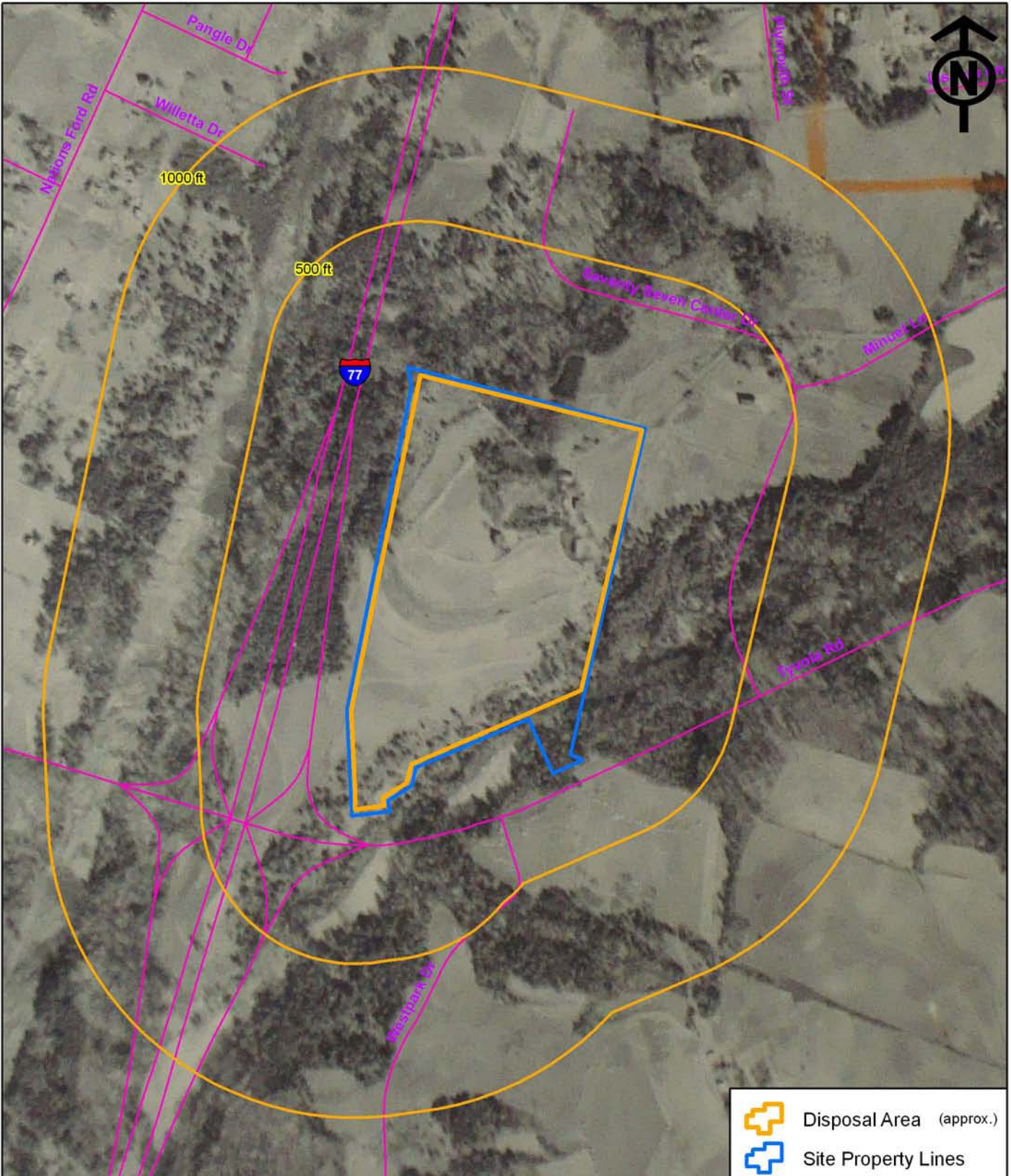


NC DENR  
OLD LANDFILL ASSESSMENT

Old Charlotte Landfill/  
Vanguard Center NONCD0001065  
Mecklenburg County, NC



AERIAL PHOTO OF SITE  
1938

Figure E-2



Source: 1. Mecklenburg County  
Soil and Water Conservation District  
(USDA NRCS)

450 225 0 450 Feet  
Scale: 1:5,400

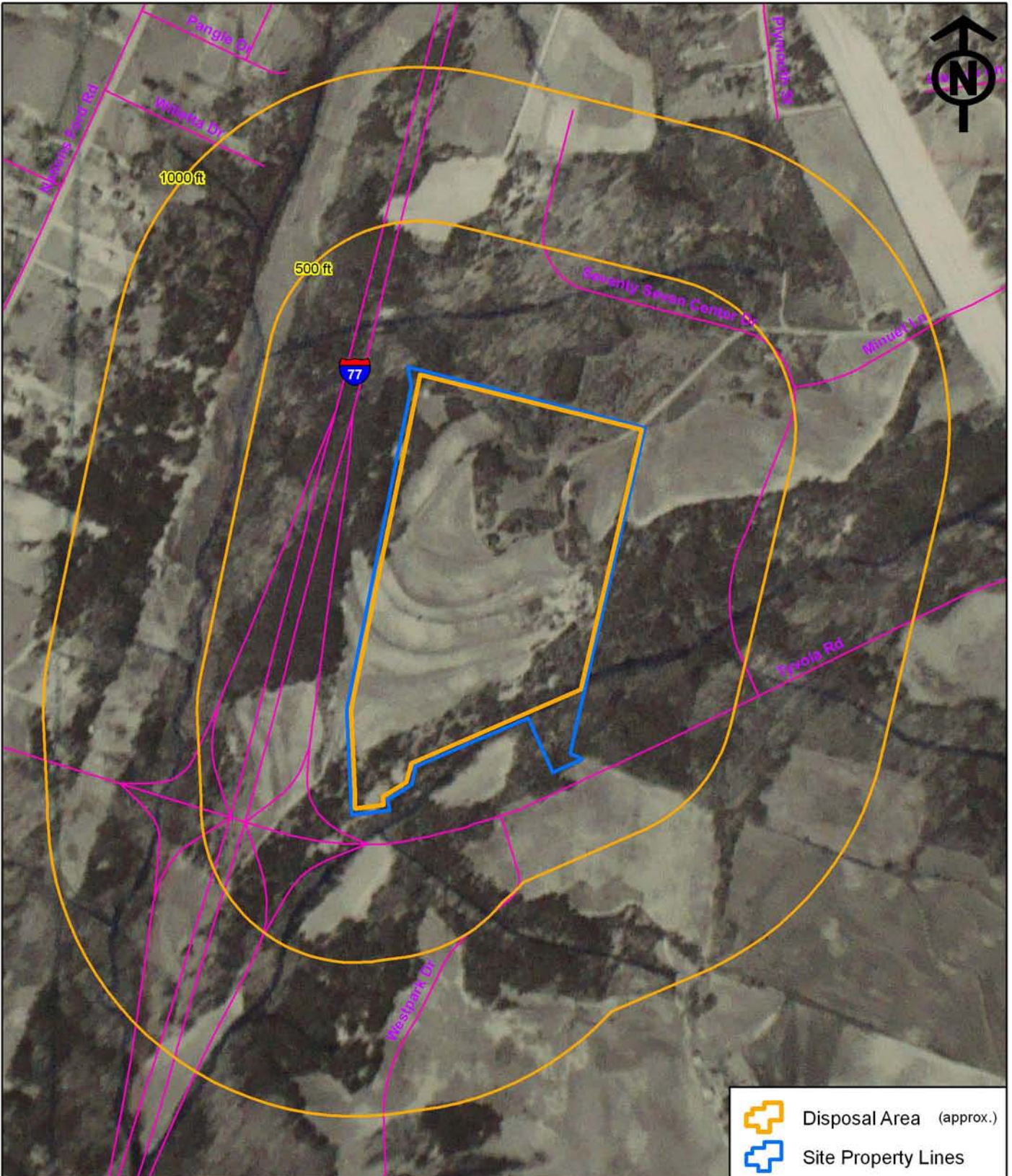
-  Disposal Area (approx.)
-  Site Property Lines



NCDENR  
OLD LANDFILL ASSESSMENT  
Old Charlotte Landfill/  
Vanguard Center NONCD0001065  
Mecklenburg County, NC

AERIAL PHOTO OF SITE  
1951



Figure E-3



Source: 1. Mecklenburg County  
Soil and Water Conservation District  
(USDA NRCS)



Scale: 1:5,400

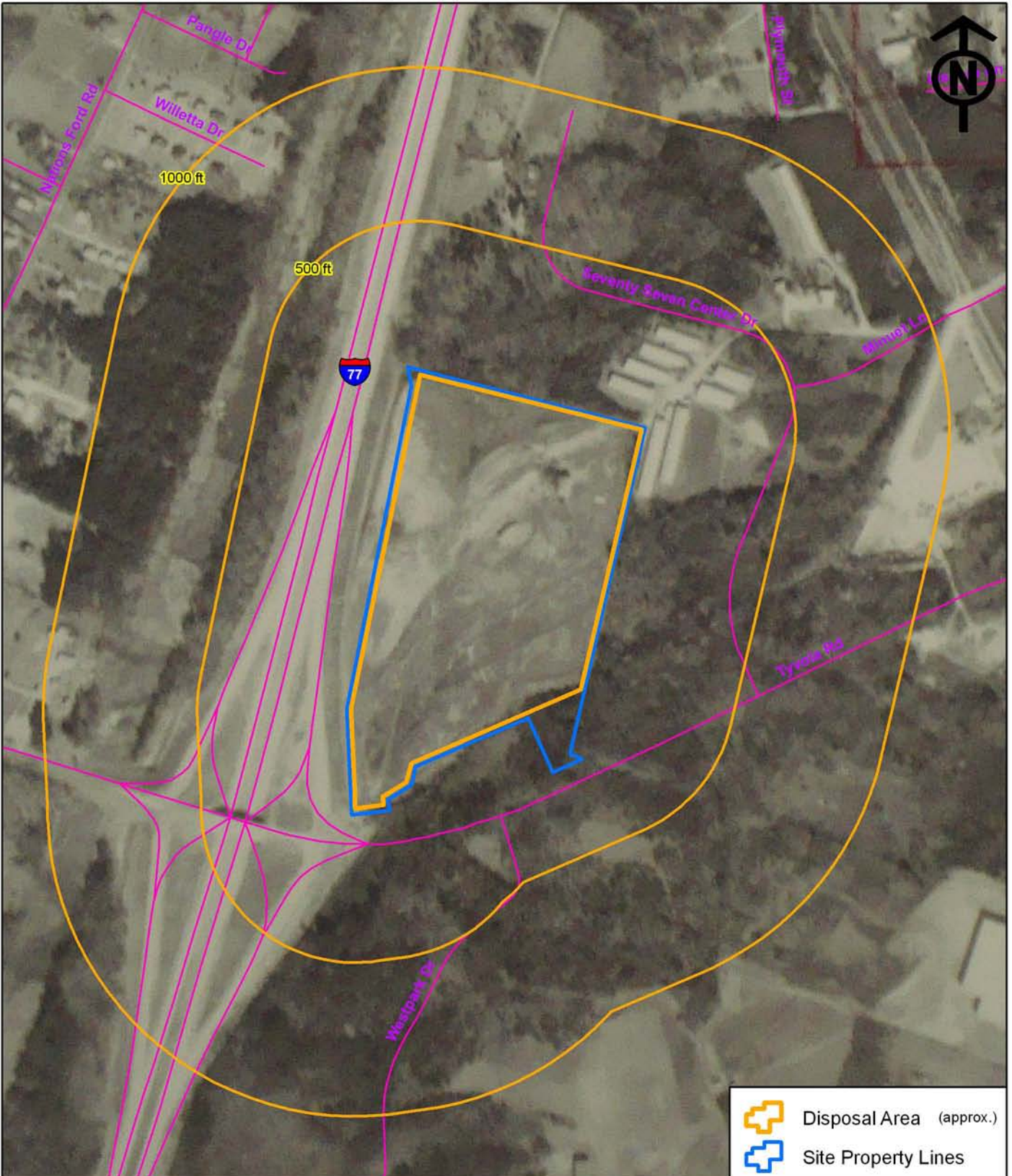
-  Disposal Area (approx.)
-  Site Property Lines





NCDENR  
OLD LANDFILL ASSESSMENT  
Old Charlotte Landfill/  
Vanguard Center NONCD0001065  
Mecklenburg County, NC

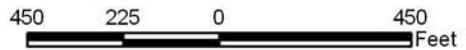
AERIAL PHOTO OF SITE  
1956

Figure E-4



 Disposal Area (approx.)  
 Site Property Lines

**Source:** 1. Mecklenburg County  
 Soil and Water Conservation District  
 (USDA NRCS)



Scale: 1:5,400




NCDENR  
 OLD LANDFILL ASSESSMENT  
 Old Charlotte Landfill/  
 Vanguard Center NONCD0001065  
 Mecklenburg County, NC

AERIAL PHOTO OF SITE  
 1968

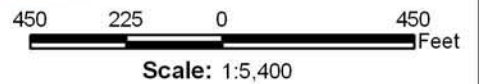
Figure E-5





 Disposal Area (approx.)  
 Site Property Lines

**Source:** 1. Mecklenburg County  
 Soil and Water Conservation District  
 (USDA NRCS)

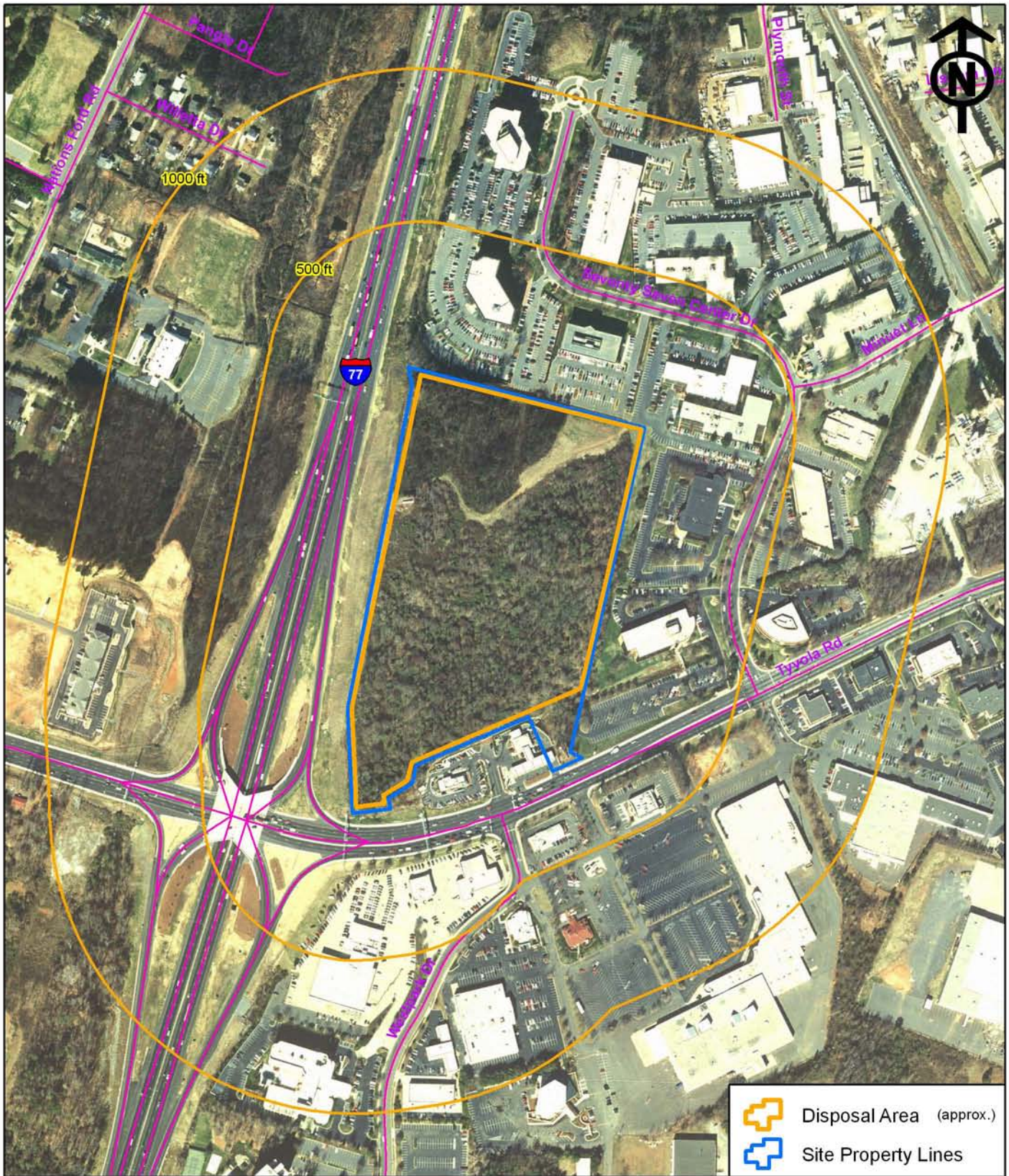




NCDENR  
 OLD LANDFILL ASSESSMENT

Old Charlotte Landfill/  
 Vanguard Center NONCD0001065  
 Mecklenburg County, NC

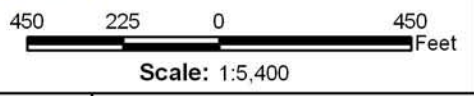
AERIAL PHOTO OF SITE  
 1983

Figure E-6



 Disposal Area (approx.)  
 Site Property Lines

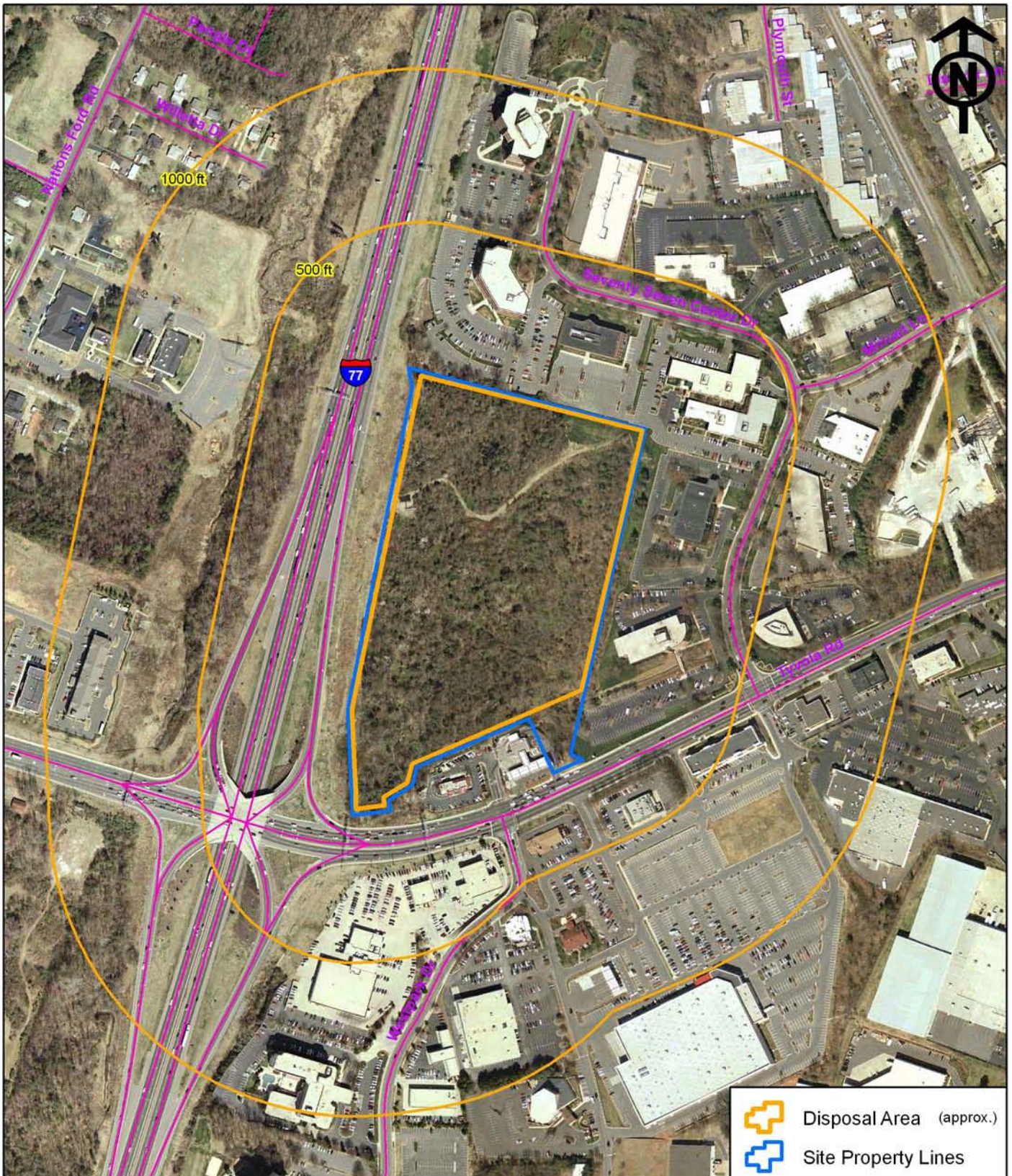
**Source:** 1. North Carolina One Map  
[ftp://204.211.239.203/outgoing/raster/local\\_imagery/mecklenburg1999/](ftp://204.211.239.203/outgoing/raster/local_imagery/mecklenburg1999/)





NCDENR  
 OLD LANDFILL ASSESSMENT  
 Old Charlotte Landfill/  
 Vanguard Center NONCD0001065  
 Mecklenburg County, NC

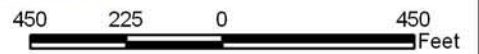
AERIAL PHOTO OF SITE  
 1999

Figure E-7



-  Disposal Area (approx.)
-  Site Property Lines

Source: 1. North Carolina One Map  
[ftp://204.211.239.203/outgoing/raster/local\\_imagery/mecklenburg2004/](ftp://204.211.239.203/outgoing/raster/local_imagery/mecklenburg2004/)



Scale: 1:5,400



NCDENR  
 OLD LANDFILL ASSESSMENT  
 Old Charlotte Landfill/  
 Vanguard Center NONCD0001065  
 Mecklenburg County, NC

AERIAL PHOTO OF SITE  
 2004

Figure E-8

