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ENVIRONMENTAL ASSESSMENT
GREENSBORO TRANSFER STATION
GUILFORD COUNTY, NORTH CAROLINA

*DIN assigned by
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**ENVIRONMENTAL ASSESSMENT
GREENSBORO TRANSFER STATION
GUILFORD COUNTY, NORTH CAROLINA**

A. Proposed Project Description

The City of Greensboro (City), North Carolina, has retained HDR Engineering, Inc. of the Carolinas (HDR) to prepare an environmental assessment (EA) in accordance with the North Carolina State Environmental Policy Act (15A NCAC 01C.0101-.0504, April 2003), for the construction and operation of a municipal solid waste (MSW) transfer station. This transfer station, designated as the Greensboro Transfer Station (Transfer Station), will become a part of the City's current integrated waste management system. The Transfer Station will be developed to provide a mechanism for transferring and transporting MSW generated in the City to a currently undesignated out-of-city landfill.

A.1 Project Description

The Greensboro Transfer Station will use a bi-level, non-compacted, and direct-dump design, consisting of a refuse hopper and a tipping area on the upper level and a "load-out" area on the lower level. Located at the entrance to the site, a scaling system will be installed to determine and record facility throughput. This system will consist of inbound and outbound truck scales and a scale house with remote operations equipment.

The operational areas (maneuvering, tipping floor, and operations/control areas) will be enclosed by a pre-engineered metal, panel-type building. The Transfer Station will be accessed by a roadway system consisting of entrance and exit roads and parking for users of the facility. Landscaping will be provided as required to enhance site aesthetics and reduce noise levels.

The Transfer Station will be capable of transferring approximately 900 tons per day (tpd) of MSW based on an 8-hour operating day. The tipping floor area will be sized to accommodate 100 percent of a peak day's refuse.

A.2 Project Location

The proposed Transfer Station site (Site) is an approximate 9-acre parcel located on the west side of the City approximately 0.5 mile north of Interstate 40 (I-40), near the Piedmont-Triad International Airport (Figures 1 and 2). Primary access to the Site will be via Burnt Poplar Road, with secondary access from Chimney Rock Place.

The Site is located in an industrial area and is currently vacant. The site is dominated by wood and scrub vegetation; however, a wooded strip exists along the borders of the Site to the south and west. The current use of the adjacent property includes tank farms to the north and east, trucking operation to the south, and vacant wooded industrial property to the west. The topography of the Site is sloped from the southeast and northwest to a drainage feature, which traverses the center of the property from east to west. Where

possible, the topography will be used to reduce the earthwork, filling, and grading required to produce the grade and elevation changes for the bi-level, direct-dump type of transfer station proposed.

A.3 Existing Facilities

There are no existing facilities on the Site.

A.4 Proposed Facilities

The Transfer Station will consist of the Transfer Station structure, an administration office, and scale-house facility (Figure 3). The primary goal of the architectural design will be to achieve a functionally efficient and versatile structure, which is aesthetically pleasing, economical, and will enhance the overall site and vicinity appearance.

The proposed Transfer Station shall conform to normal architectural design for this type of operation and shall be compatible in finish and appearance with the public nature of the project and a 25-year anticipated design life. Building design and material selection shall reflect consideration of such factors as normal physical abuse, corrosion, heating, insulation, cooling, and ventilation requirements for the structure. The final design shall consider maintenance and cost-effectiveness of the materials selected.

The administration area will be located adjacent to the Transfer Station and will provide one office, a break room, and restroom facilities with shower and lockers.

The scale-house area will be designed to provide a controlled environment for computers and other required equipment. The design will also provide the scale operator maximum visibility for observation of inbound and outbound vehicles as well as on-going traffic patterns at the Transfer Station.

A.4.1 Transfer Station

The Transfer Station building will be of bi-level construction. The upper level will consist of the concrete tipping and maneuvering area, a hopper, and operations area, all of which will be enclosed by concrete push walls. The lower level at the south end will accommodate the transfer load-out vehicles. Both levels of the building will be enclosed by a metal building with a ventilation system.

The proposed area for the tipping floor is 28,000 square feet (sf) (160 feet (ft) by 130 ft), while the proposed area for the load-out is 4,800 sf (30 ft by 160 ft). There will be approximately an 18-foot difference in floor elevations between the tipping floor and lower level load-out. A 25-foot clear eave height above the tipping area will be provided to allow safe vehicle unloading without damage to the structure.

The tipping floor and lower level load-out will be designed to collect any fluids (rain water, wash-down water, etc.). These fluids will be routed through the grease and grit trap and then to the sanitary sewer for final off site treatment.

A.4.2 Administration Area

The approximately 800-sf administration building will be located contiguous to the northern end of the Transfer Station. Construction will blend in color and appearance with the Transfer Station. Access will be provided from the main floor of the administration building to the tipping floor. All occupied spaces will be centrally heated and air-conditioned.

A.4.3 Scale Operations Area

The scale-house shall be of compatible construction to the Transfer Station. The floor elevation of the approximately 400-sf building will be above the scale-deck elevation to allow drivers and scale operators to exchange payments and receipts at similar elevations. Provisions will be incorporated for staff to view into the top of incoming loads. The scale area will be provided with janitorial and restroom facilities for the scale operation personnel.

A.5 Proposed Utilities

Potable water will be supplied from a service tap to the City's water system and equipped with a backflow preventer (BFP). Non-potable water will be supplied from the same City water tap (with no BFP), and distributed to the upper and lower facility levels for fire protection and wash-down of all tipping floor and truck traffic areas. All water (potable and non-potable) and sanitary sewer line designs will be based on the maximum flow requirements for the respective system.

Sanitary sewer, including floor wash-down discharge, will be connected to an existing City sewer collection system off-site. A grit and grease trap will be provided to collect wash-down water from the tipping floor and load-out area.

On-site storm water will be controlled and treated according to City ordinances. The storm water management system will contain appropriate Best Management Practices (BMPs) and outfall structures to assure compliance with local watershed rules.

A.6 Proposed Site Grading

General site grades will be designed to minimize disturbance to the existing topography. However, some cuts and fills will be required to allow load-out vehicles to access the lower level of the Transfer Station. The soil stockpile on site will be used to fill areas to the proper grades.

B. Purpose and Need for the Project

B.1 Project Purpose

The City currently operates the White Street Sanitary Landfill (Landfill), which provides disposal services for the City's MSW. This waste consists of residential waste, commercial, yard, construction and demolition (C&D), and other wastes. In lieu of expanding, the City has decided to close its existing sanitary landfill and contract for MSW disposal services in a regional landfill. The City plans to continue to manage the C&D and yard waste streams at the Landfill.

In order to dispose of the City's MSW in a regional landfill, the City proposes to construct a City-owned and operated transfer station. The City will haul or contract for the hauling of solid waste from the transfer station to the Subtitle D landfill. Adequate MSW transport and handling is required to comply with Federal and State regulations, and to minimize the potential for MSW to impact the environment.

B.2 Service Area and Tonnage

The service area will be defined as a part of the permit application filed in accordance with the Solid Waste Management Rules, 15A NCAC 13B Section .0200. Although the service area for the Project has not been defined, it will likely include Guilford County (County) and the surrounding region.

The waste quantities projected in the "Solid Waste Management Study Update" report (June 2001), prepared by HDR for the City, were used to formulate the tonnage size requirement for the Transfer Station. The report projects waste quantities through the year 2027 for the options including City-controlled and total waste. The Transfer Station is sized based on the MSW currently received at the White Street Landfill adjusted for anticipated losses of MSW collected by private haulers. The Transfer Station is projected to have a throughput requirement of approximately 225,000 tons per year. Assuming a six-day workweek, this translates to approximately 725 tons per day (tpd) on an average workday basis. Based on previous experience and a review of applicable existing data, it is estimated that the peak day can be as much as 20 percent in excess of the average day. Therefore, the Transfer Station must be minimally sized to accommodate 865 tpd on a peak-day basis; thus, the facility will be designed to handle 900 tpd.

B.3 Operations Description

Upon arrival at the scale facility, the scale operator will determine the load characteristics and acceptability of the waste material being delivered. If the load is determined to be unacceptable, it will be rejected and directed to an appropriate disposal facility. If required, notification will be given to the proper authorities for the handling of illegal or hazardous waste materials.

After the weighing process, the collection vehicles will be directed to the Transfer Station. Waste vehicles will be stopped at the entrance of the building by a station spotter and then directed to specific deposition areas on the tipping floor. It is the spotter's responsibility to queue the vehicles at the building entrance, keep the truck maneuvering area clear, and provide a safe ingress and egress. After dumping, the vehicles will exit the Transfer Station. Vehicles not previously tared will be directed back to the scale facility to determine the weight of the empty vehicle. The design may include a separate tipping area for "citizen" vehicles. This would reduce the interaction between citizen and commercial vehicles during peak operating hours.

Waste dumped on the tipping floor will be pushed with a front-end loader through the hoppers into the trailers in the lower load-out area. A mobile crane with a grapple bucket will be located behind the hoppers for use in leveling and tamping the loads in the trailers. Load-out scales will be used to determine when a trailer has been fully loaded. The loaded trailers will be moved to a staging area prior to leaving for the disposal facility. Each load will be properly covered and secured prior to transport.

The number of trips per day is based on the throughput capacity of the Transfer Station and haul time to the designated disposal site. The Transfer Station, in handling 900 tpd, will minimally require 45 transfer vehicle trips, assuming a transfer payload of 20 tons. Given normal operation, approximately 20 tractors and 25 trailers would be dedicated to this station. Additional tractors and trailers should be available for backup purposes.

Solid waste will not be permitted to remain on the tipping floor overnight. Solid waste may be stored overnight on-site in trailers for hauling the next day. The final waste loaded on Saturday will be stored on-site until Monday morning for delivery to the Landfill. One or more empty trailers will also remain at the Transfer Station overnight; this will accommodate Transfer Station requirements each morning and allow schedule flexibility with respect to Transfer Station personnel and driver shifts to complete transfer operations and unloading at the end of each workday.

C. Alternatives Analysis

C.1 No Action

The No Action Alternative (NAA) would require that the City discontinue MSW collection due to the closure of the Landfill. Hauling MSW to the Landfill will not be a viable option after the current landfill reaches its capacity. The City has opted not to expand this existing landfill due to lack of community support and funding issues.

Discontinuing collection service is not a viable option, as the City is required by State and Federal Regulations to collect and dispose of MSW.

C.2 Alternatives Analysis

In mid-1994, the City began the permitting process for design of the lined landfill area at the City owned and operated White Street Landfill. A part of the State's permitting process requires that a resolution from the local governing body be passed supporting a new landfill or landfill expansion. The City Council approved such a resolution on March 20, 1995, and the first lined landfill area at the Landfill was placed into operation on December 16, 1997.

One component of the March 1995 resolution included a requirement that the City evaluate alternatives to the continued use of the Landfill for MSW disposal. In June 1995, the City coordinated the development of a Solid Waste Management Study (Study), and included representation from the County and the City of High Point. The scope of the Study, among other solid waste issues, included evaluation of five disposal alternatives for waste generated within the County:

- Continued use of the Landfill.
- Development of a new multi-jurisdictional landfill within the County.
- Development of a resource recovery technology.
- Development of a composting facility.
- Privatization of waste disposal at a privately-owned landfill in the region.

The Study was completed in July 1996, and the City elected to continue use of the White Street Landfill.

In 2001, the City coordinated with HDR to update the 1996 Study (2001 Update). The 2001 Update was completed in June 2001, and reviewed four disposal alternatives:

- Continued use of the Landfill.
- Development of a new multi-jurisdictional landfill within the County.
- Implementation of a resource recovery technology.
- Privatization of waste disposal at a privately-owned landfill in the region.

In July 2001, after considering the economic, community, and environmental impacts of the disposal alternatives, the City Council unanimously declared its intent not to expand the Landfill for MSW disposal, and to begin transition to waste disposal at a privately-owned landfill. Development of the Transfer Station is required to fulfill the Council's directive.

The proposed facility would be located on a City-owned lot in a heavily industrialized area. Access to both the City service area and a major highway is easily achieved from the site. Community impacts are minimal due to the lack of residences in the area. Environmental impacts of the site development are also minimal as described in Section D that follows.

D. Existing Environmental Characteristics of the Project Area

D.1 Topography

The Site is a generally level to gently sloping undeveloped parcel at the northwest corner of the Chimney Rock Road-Burnt Poplar Road Intersection. The Site slopes down to the west, with approximately 17 feet of topographic relief existing across the proposed building area (ECS, 2000).

The Federal Emergency Management Agency (FEMA) National Flood Insurance Program Flood Insurance Rate Maps (FIRMs) were obtained to determine the location of flood hazard areas in proximity to the Study Area. The FIRM for the Site (Community Panel Number 375351 0011C) was checked to verify floodplain locations. The Site is located in Zone X, areas determined to be outside of the 500-year floodplain.

D.2 Soils

Two major soil series, Enon (En) and Mecklenburg (Mh), dominate the Site [United States Department of Agriculture (USDA, 1977)]. The Enon series consists of very deep, well-drained, slowly permeable soils on ridge tops and side slopes. Within the Site, Enon fine sandy loam is present on slopes ranging from 2 to 10 percent. In addition, the Enon-Urban land complex is present. The Mecklenburg series consists of very deep, well-drained, slowly permeable soils that formed in residuum weathered from intermediate and mafic crystalline rocks of the Piedmont uplands. The Mecklenburg soils found within the Site include sandy clay loam with eroded slopes ranging from 2 to 6 percent and the Mecklenburg-Urban land complex (USDA, 1977).

In a subsurface exploration and geotechnical engineering analysis, Engineering Consulting Services, Ltd. (ECS) concluded that the soils were suitable for support of the proposed building on shallow foundations. In addition, they recommend that a lower than typical foundation bearing pressure be used to mitigate potential excessive settlement of the building components.

D.3 Land Use

Although the Site is currently not developed, it has been disturbed in the past as evidenced by a large soil stockpile, ditching, and successional vegetation. There are petroleum pipelines along the northern boundary of the Site. In addition, there are several groundwater wells on the Site to monitor off-site migration of contaminants from an adjacent facility. Land use surrounding the Site is industrial in nature. The Site is currently zoned to support the proposed activities.

D.4 Jurisdictional Waters of the United States

Jurisdictional waters of the United States include wetlands and streams and are regulated under the authority of the Clean Water Act, Section 404. National Wetland Inventory

(NWI) mapping shows no wetland areas located within or adjacent to the Site. Wetland resources were evaluated at the Site according to the methods outlined in the US Army *Corps of Engineers Wetland Delineation Manual* (USACE, 1987). There is one small wetland and a ditch within the Site. The total wetland acreage is approximately 0.02 acres, and both of these areas exhibit all three required wetland indicators of hydric soils, hydrophytic vegetation, and hydrology. These areas are located in a low point of the Site where on - and off -site storm water collects for a sufficient time to allow these wetland indicators to form. The wetland area is dominated by soft rush (*Juncus effusus*) and discharges to a ditch running to the west. The ditch dissipates into a non-jurisdictional scrub area on the western portion of the site. The approximate wetland locations on the Site are shown on Figure 4.

There is a drainage feature within the Site; however, a letter from North Carolina Division of Water Quality (NCDWQ) indicates that this drainage is not considered to be an intermittent stream (Appendix A). A portion of the drainage feature on-site is considered jurisdictional since it exhibits similar indicators to the wetland. However, it is considered a wetland rather than a stream due to lack of stream characteristics. Because NCDWQ does not recognize this feature as an intermittent stream within the Site, it is not subject to the Randleman Lake Water Supply Watershed Regulations. However, the feature is deemed to be intermittent at the property boundary, at which point those Regulations do apply.

D.5 Prime or Unique Agricultural Lands

The Natural Resource Conservation Service (NRCS) document "Important Farmlands of North Carolina" was reviewed to determine the presence of soils that have potential for agriculture (USDA, 1999). Prime farmland includes all soils with slopes between 0 and 8 percent, which are in Capability Classes I and II, and some in Class III. Soils that flood and are at least somewhat poorly drained meet prime farmland requirements under certain conditions.

Although undeveloped, the Site has been previously disturbed. Within the Site, two soil types, Enon fine sandy loam (slopes ranging from 2 to 6 percent) and Mecklenburg sandy clay loam (eroded slopes ranging from 2 to 6 percent) are classified as prime farmland. In addition, Enon clay loam (eroded slopes ranging from 2 to 6 percent) is classified as farmland of statewide importance. Because the Site has been disturbed and is surrounded by industrial areas, the farmland potential of this Site is negligible.

D.6 Public Lands and Scenic, Recreational, and State Natural Areas

No County, State, or Federal recreational areas exist within the proposed Site.

D.7 Areas of Archaeological or Historical Value

A request for information was sent to the North Carolina State Historic Preservation Office (SHPO) to determine the presence of significant archaeological and historical sites

within the proposed Site (Appendix A). Archaeological or historical sites are not anticipated to exist on the Site due to the previous disturbance. The SHPO response will be included with the final EA.

D.8 Air Quality

Current air quality is relatively good in the County. Data from the U.S. Environmental Protection Agency (USEPA) Aerometric Information Retrieval System (AIRS) from 1998 to 2003 show that, during the year 2002, there were only three days when air quality reached an unhealthy level in the County. There were no unhealthy air quality days between 1998 and 2001 or thus far in 2003 (EPA, 2003). The County is a non-attainment area for carbon monoxide and a maintenance area for ozone [North Carolina Department of Environment and Natural Resources (NCDENR, 1995)]. The City is currently participating in the Early Action Compact regarding non-attainment status for ozone. In the future, the Triad area may be in non-attainment for particulate matter (PM 2.5). Local air quality could be influenced by the presence of the fuel tank farms and industries.

D.9 Noise Levels

Ambient noise levels near the Site are consistent with the industrial nature of the surrounding area. Current noise includes operation of vehicles including trucks, forklifts, and occasional heavy equipment. In addition, there is a railroad crossing near the northern boundary of the Site. The Site is near the Piedmont-Triad International Airport and a proposed runway for Federal Express. Increased air traffic could potentially increase ambient noise levels at the Site.

D.10 Water Resources

Surface Water

The Site is located in the Cape Fear River basin, more specifically in the Deep River Hydrologic Unit No. 03030003 (USGS, 2003). The NCDWQ Sub-basin designation for streams within the vicinity of the Site is 03-06-08 (NCDENR, 2000a). Within the Site, there is one drainage feature, which eventually flows into the East Fork Deep River. NCDWQ has determined that this feature is not considered to be an intermittent stream until it reaches the property boundary.

The East Fork Deep River watershed (NCDWQ Index No. 17-2-(0.3)) is classified by the NCDWQ as Water Supply IV. Class WS-IV waters are used as sources of water supply for drinking, culinary, or food-processing purposes in moderately- to highly-developed watersheds. This Site also falls within the Randleman Reservoir Watershed, which subjects it to additional rules regarding stream buffers and storm water management (NCDENR, 2000a). East Fork Deep River is listed as partially supporting its classification because of an impaired biological community and violations of the State turbidity standard. Possible causes of this impairment include urban non-point source pollution and road construction activities within the watershed (NCDENR, 2000a).

Within the Site, there are no streams listed in North Carolina's 2000 Section 303(d) List of Impaired Waters (NDCENR, 2000b). However, East Fork Deep River is listed on Parts 1, 4, and 5 of the 303(d) list. Placement on the list is a result of biological impairment, turbidity, and habitat degradation caused by high fecal coliform levels and high turbidity. This is most likely a result of urban runoff, storm sewers, and permitted industrial discharges. There are 10 National Pollutant Discharge Elimination System (NPDES) dischargers located within one mile of the Site (Table 1) (NCDENR, 2003). Although the two that discharge into Horsepen Creek are within one mile of the Site, this stream is in a separate sub-basin than that which drains the Site.

Permit No.	Permittee	Type	Receiving Stream
NC0000795	Exxon Mobil Refining and Supply Company	Industrial Process & Commercial Wastewater Disposal	East Fork Deep River
NC0003671	Amoco Oil Company	Industrial Process & Commercial Wastewater Disposal	Horsepen Creek
NC0022209	Motiva Enterprises LLC	Industrial Process & Commercial Wastewater Disposal	Long Branch
NC0026247	TransMontaigne Terminaling, Inc.	Industrial Process & Commercial Wastewater Disposal	East Fork Deep River
NC0031046	Colonial Pipeline Company	Industrial Process & Commercial Wastewater Disposal	East Fork Deep River
NC0042501	Charter Triad Terminals LLC	Industrial Process & Commercial Wastewater Disposal	East Fork Deep River
NC0051161	Plantation Pipe Line Company	Industrial Process & Commercial Wastewater Disposal	East Fork Deep River
NC0065803	Marathon Ashland Petroleum LLC	Industrial Process & Commercial Wastewater Disposal	East Fork Deep River
NC0069256	TransMontaigne Terminaling, Inc.	Industrial Process & Commercial Wastewater Disposal	East Fork Deep River
NC0071463	Apex Oil Company	Industrial Process & Commercial Wastewater Disposal	Horsepen Creek

Potential non-point source pollution within the Site includes runoff from the existing roads and industrial areas adjacent to the Site. Currently, a portion of the off-site storm water drains to the north side of the access road to the Site.

Ground Water

Ground water seems to occur relatively shallow from about 3 to 10 feet below the surface. Currently, there are several ground water wells installed on the Site to monitor an existing contaminant plume. The groundwater contains low levels of several organic contaminants including benzene and 1,2-dichloroethane above state groundwater standards. These constituents are indicators of the migration of a contaminant plume from an adjacent site.

D.11 Forest Resources and Natural Vegetation

Current environmental documentation and a field inspection were used to characterize the forest and vegetation resources at the proposed Site. Currently, the Site consists of a disturbed successional community. The Site has been cleared in the past and is currently dominated by shrubs, vines, and herbs. The western portion of the Site contains older successional vegetation including some small trees. The southern edge of the Site contains a thin, wooded strip that separates the rest of the Site from the road. The vegetation within the Site is indicative of the disturbed nature of the Site and is dominated by the following species. The canopy consists of Virginia pine (*Pinus virginiana*), Sweetgum (*Liquidambar styraciflua*), Tulip poplar (*Liriodendron tulipifera*), Red maple (*Acer rubrum*), Cherry (*Prunus serotina*), and various Oaks (*Quercus* sp.). The shrub layer includes invasive species, such as Staghorn sumac (*Rhus typhina*), and Privet (*Ligustrum sinense*). Queen Anne's lace (*Daucus carota*), Goldenrod (*Solidago* sp.), Morning glory (*Ipomoea purpurea*), and Blackberry (*Rubus* sp.) dominate the herb layer, which also includes an array of other successional species. Vines include Muscadine grape (*Vitis rotundifolia*).

D.12 Shellfish or Fish and Their Habitats

No shellfish habitat exists near the Site or within the sub-basin. Existing records from sampling points were reviewed to assess the quality of aquatic resources in the East Fork Deep River. There is only one macroinvertebrate sampling site on the East Fork Deep River. Sampling at this site at SR 1541 yielded a Fair rating in 1993 and 1998. There are no NCDWQ fish sampling sites on East Fork Deep River.

D.13 Wildlife

A Site visit was made to determine the presence of wildlife and wildlife habitat in the area. On-site evidence of wildlife included occasional White-tailed deer (*Odocoileus virginianus*) and Raccoon (*Procyon lotor*) tracks, and Gray squirrel (*Sciurus carolinensis*). Significant wildlife populations are not anticipated to occur on the Site due to its relatively small size, history of disturbance, and the urban/industrialized nature of the local area. The Site could be used for foraging by wildlife inhabiting the adjacent forested lot to the west.

D.14 Protected Species and Natural Resources

The North Carolina Natural Heritage Program (NCNHP) and the United States Fish and Wildlife Service (USFWS) were contacted on July 10, 2003, to determine the presence of threatened and endangered species and natural areas. In addition, the NCNHP Geographic Information System (GIS) database was searched for elements occurring on the Site and within a 1-mile buffer.

Federal law [under the provisions of the Endangered Species Act of 1973 (ESA), as amended] requires that any action likely to adversely affect a species classified as

Federally protected, be subject to review by the USFWS. Plants and animals with Federal classifications of Endangered (E) or Threatened (T) are protected under the provisions of Sections 7 and 9 of the ESA, as amended. Federal Species of Concern (FSC) are also a priority of the USFWS, but are not protected under the ESA. Organisms, which are listed as Endangered (E) or Threatened (T) by the NCNHP list of Rare Plant and Animal Species, are afforded limited State protection under the North Carolina State Endangered Species Act and the North Carolina Plant Protection and Conservation Act of 1979.

There is one Federally listed species for the County. The Bald eagle (*Haliaeetus leucocephalus*) is listed as Threatened-Proposed Delisted and Threatened at the Federal and State levels, respectively. In addition, there is one FSC, Carolina darter (*Etheostoma collis lepidinon*), listed by the USFWS for the County. A review of the NCNHP database, as of December 2002, shows one record of Federally or State listed species within 1-mile of the Site. The Greensboro burrowing crayfish (*Cambarus catagius*) occurs approximately 4,300 ft from the northeast corner of the Site and is listed as Special Concern (SC) at the State level. This species is not Federally listed.

E. Predicted Environmental Effects

E.1 Topography

Topography will be altered during construction of the transfer station, and has been altered by previous disturbance. However, these impacts will be minimized by using the existing grades on site to the maximum extent. The soil mound on the site will be used to regrade the site where necessary. No construction or operation of the facility will occur in the 100-year floodplain.

E.2 Soils

The Project will have minimal impacts upon the soil conditions at the Site. Disturbance of up to 9 acres of soil will occur during land clearing and construction of the Transfer Station. Much of the soils on-site have been disturbed by prior Site uses. However, sediment and erosion control measures will be used to minimize soil losses and impacts to water resources during construction. Construction practices will adhere to standards set forth in the *North Carolina Erosion and Sediment Control Planning and Design Manual* (NCDENR, 1993). A sediment and erosion control plan will be submitted to the North Carolina Division of Land Resources for approval. These required measures will limit soil losses, and construction impacts are therefore not considered significant.

E.3 Land Use

Land use within the Site will not be impacted by construction of the Project. The Site is in an area currently zoned for industrial use. Although the Site is currently undeveloped, it has been previously disturbed. The use of this Site as a part of the City's solid waste

management system is compatible to land use in the area, as the Site is bounded by parcels with industrial land use.

E.4 Jurisdictional Waters of the United States

Within the Site, there is one wetland with an area of approximately 0.02 acres. Impact to this wetland is not considered to be significant. The Clean Water Act Sections 404 and 401 permitting process will assure that any impacts to jurisdictional waters will be minimal. Compensatory mitigation is not expected to be required for this project since the amount of impacts do not meet or exceed regulatory thresholds. Therefore, these impacts are not considered significant.

No stream impacts will result from the construction of the Transfer Station. The drainage feature on the Site is not a stream, and provides no aquatic habitat. Therefore, it will be included as an acreage impact under the Section 404 permitting process. Under current permitting requirements, compensatory mitigation will not be required for any impacts to this feature. As detailed in Section D.4, the Randleman Watershed rules do not apply to the on-site drainage feature.

E.5 Prime and Unique Agricultural Lands

Prime farmlands will not be impacted by the construction and operation of the transfer station. Although there are soil types classified as prime farmland and farmland of statewide importance mapped within the Site, the Site has been previously disturbed. In addition, the Site is within an industrial area; therefore, any potential prime farmland has previously been impacted.

E.6 Public Lands and Scenic, Recreational, and State Natural Areas

There are no public lands or scenic, recreational, or State natural areas within the proposed Site; therefore, no impacts to these resources are expected.

E.7 Areas of Archaeological or Historical Value

Archaeological or historical sites are not anticipated to exist on the Site due to the previous disturbance. The SHPO response will be included with the final EA.

E.8 Air Quality

No significant, adverse, direct impacts to air quality are expected to occur as a result of construction of the Project. Dust control within the construction areas will be minimized through frequent road cleaning, seeding, or water application. No burning of material will be allowed.

Operations at the Transfer Station will likely impact air quality at the Site; however, it is currently not possible to quantify this impact. The Project will likely generate up to 600 vehicle trips per day. This includes City and commercial haulers and tractor-trailers

hauling MSW to and from the Transfer Station. Although there are no current haulers traveling to the Site, there is commercial traffic to the adjacent industrial sites. City and commercial haulers will make the same number of trips per day, regardless of where the Site is located.

The Site is located within a currently industrialized area. There are no residential, scenic, or natural areas near the Site. The Site is approximately 0.3 miles north of I-40 and 0.1 miles south of US Highway 421. The projected impact is not significant compared to the existing conditions adjacent to and in the vicinity of the Site.

The operation of any transfer station requires that waste be dumped onto a concrete floor and loaded into trailers. It is likely that odors will be generated from operations; however, odors associated with the Transfer Station will be controlled effectively since the operational area is enclosed on three sides. Odors are not anticipated to reach adjacent properties. The industrial nature of the area should minimize odor complaints. There are no residential areas immediately adjacent to the Site.

E.9 Noise Levels

Noise levels will not be significantly impacted by construction of the Project. All equipment will be fitted with appropriate mufflers. Temporary noise associated with construction will not adversely affect surrounding properties since a majority of the area is industrial in nature. Construction will occur during standard working hours, which will also limit disturbance.

Operation of the Transfer Station will increase noise levels compared to current conditions on the Site. Noise associated with vehicles and heavy equipment will occur during operating hours; however, vehicles and heavy equipment are currently associated with facilities on adjacent parcels. In addition, the vehicle dumping and trailer loading will occur inside the Transfer Station building, which will buffer some of the noise. Per Occupational Safety and Health Administration (OSHA) regulations, operations personnel working within the Transfer Station will be provided with hearing protection.

Operations should not impact the adjacent properties. All of these properties are industrial in nature. In addition, there are no residential areas adjacent to the Site; therefore, no sensitive noise receptors should be impacted by the Project.

E.10 Water Resources

Surface Water

No streams will be directly impacted by the Project.

Currently, there is no impervious surface on the Site. The proposed facility will have approximately 5 to 6 acres of impervious surface, which will include the Transfer Station, administrative building, scale-house, and storm water management structures. A storm

water management system will be constructed to collect and treat surface water runoff from storm events. Storm water discharging adjacent to the required riparian buffers will be routed through structures to ensure diffuse flow and non-erosive velocities are achieved.

Water that drains from the refuse and all water used to wash the tipping floor will be collected and pumped into the City's sanitary sewer system; therefore, there will be no direct impact to surface waters. Additional leachate generation at the eventual regional facility will be treated and discharged in accordance with all Federal and State regulations, and within the permitted limits of the facility.

Ground Water

Ground water on-site is already contaminated with several volatile organic compounds from off-site sources. Every effort will be made to assure that ground water is not contacted during construction. Excavated soils will be screened and any contaminated soils or ground water encountered during the construction will be contained and properly disposed. No additional impacts to groundwater quality are anticipated. The Site will be supplied with water from the City's distribution system.

E.11 Forest Resources and Natural Vegetation

Because the Site has been disturbed in the past, there are no significant forest resources on-site. Vegetation within the Site comprises a disturbed, successional community. Clearing the Site for construction and operation of the Transfer Station will permanently impact up to 9 acres of this disturbed successional community. However, this community does not have value as a forest resource. In addition, a majority of the small wooded strip on the southern portion of the Site will be included in a required Tree Conservation Area, and no trees greater than 4 inches diameter breast height will be removed.

E.12 Shellfish or Fish and Their Habitats

There is no shellfish or fish habitat within the Site; therefore, there will be no impacts to these resources from the proposed Project.

E.13 Wildlife

Construction of the Transfer Station will impact approximately up to 9 acres of terrestrial habitat. Wildlife may be directly affected by construction and land clearing mortalities, as well as loss of habitat. However, any impacts to wildlife will not be significant, as the Site is located in an industrial area and does not provide primary habitat for wildlife.

E.14 Protected Species and Natural Resources

The Project will not affect the Bald eagle due to the lack of habitat for this species on the Site. In addition, the Site is in an industrial area with few bodies of open water; therefore, no adjacent parcels would likely provide habitat for this species.

E.15 Introduction of Toxic Substances

Toxic substances will be controlled during the construction and operation of the Project. Fuel and oil for construction equipment will be stored in a predetermined area, and any spills will be contained and controlled. Equipment will be properly maintained to prevent leakage of fuel and oil. As mentioned previously, any contaminated soils or ground water contacted during construction will be contained and disposed at an appropriate facility in compliance with State and Federal regulations.

During operation of the facility, several methods will be used to assure no introduction of toxic substances to the environment. First, materials brought to the Site will be screened for toxic, hazardous, and radioactive wastes. Any vehicle containing such materials will be directed to an appropriate facility to handle those wastes. Second, spotters and equipment operators will visually screen the waste after it has been dumped. Third, loads will be screened visually at the scale house, which will also be fitted with a radioactive monitoring device. Finally, as mentioned in Section E.10, wash-down and contact water will be collected through floor drains and be piped to the City's sanitary sewer.

E.16 Summary of Impacts

Construction and operation of the Project is likely to cause the following unavoidable impacts:

- Disturbance of up to 9 acres of previously disturbed soils for construction of the Project.
- Permanent loss of 0.02 acres of emergent wetland and ditch.
- Clearing of up to 9 acres of previously disturbed successional scrub-shrub uplands and limited associated wildlife habitat.

Each of these effects is described in detail in the appropriate resource section. None of these impacts are considered significant, based on the reasoning described in the appropriate section.

F. Mitigative Measures

No mitigation should be necessary for the proposed Project due to the lack of significant impacts associated with the facility. Wetland impacts will be below the thresholds established as significant impacts requiring mitigation. Other impacts associated with the Site are mitigated through the design and operation of the facility, as described in the appropriate section.

G. Required State and Federal Permits

The following permits or approvals will be required prior to the implementation of the Project.

404/401 Permit/Certification

Wetlands and surface waters are under the jurisdiction of the USACE through the Clean Water Act, Section 404. Impacts to jurisdictional wetlands are allowable if no practical alternative exists for the Project. Unavoidable impacts to wetlands will require a permit application to the USACE and NCDWQ. No compensatory should be required for potential wetland impacts. There will be no stream impacts for this Project.

Erosion and Sediment Control Permit

Plans and specifications for the Project will be submitted to the North Carolina Division of Land Resources (NCDLR), Land Quality Section prior to land disturbing activities.

NPDES

The Site construction will comply with NPDES General Permits through approval from NCDLR.

Solid Waste Permit

A Site application will be submitted to the Division of Waste Management for issuance of a permit for the Transfer Station.

H. References

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<http://www.epa.gov/air/data/reports.html>
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- United States Department of Agriculture. 1999. *Important Farmlands of North Carolina*. Natural Resources Conservation Service, Raleigh, NC. www.mo14.nc.nrcs.usda.gov.
- _____. 1977. Soil Survey of Guilford County, North Carolina. Natural Resources Conservation Service.
- United States Fish and Wildlife Service. 2003. Threatened and Endangered Species in North Carolina. <http://nc-es.fws.gov/es/countyfr.html>
- United States Geologic Survey. 2003. USGS Water Resources of North Carolina. <http://wwwnc.usgs.gov/>.
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Guilford
County



**Greensboro
Transfer
Station**

Greensboro

High Point

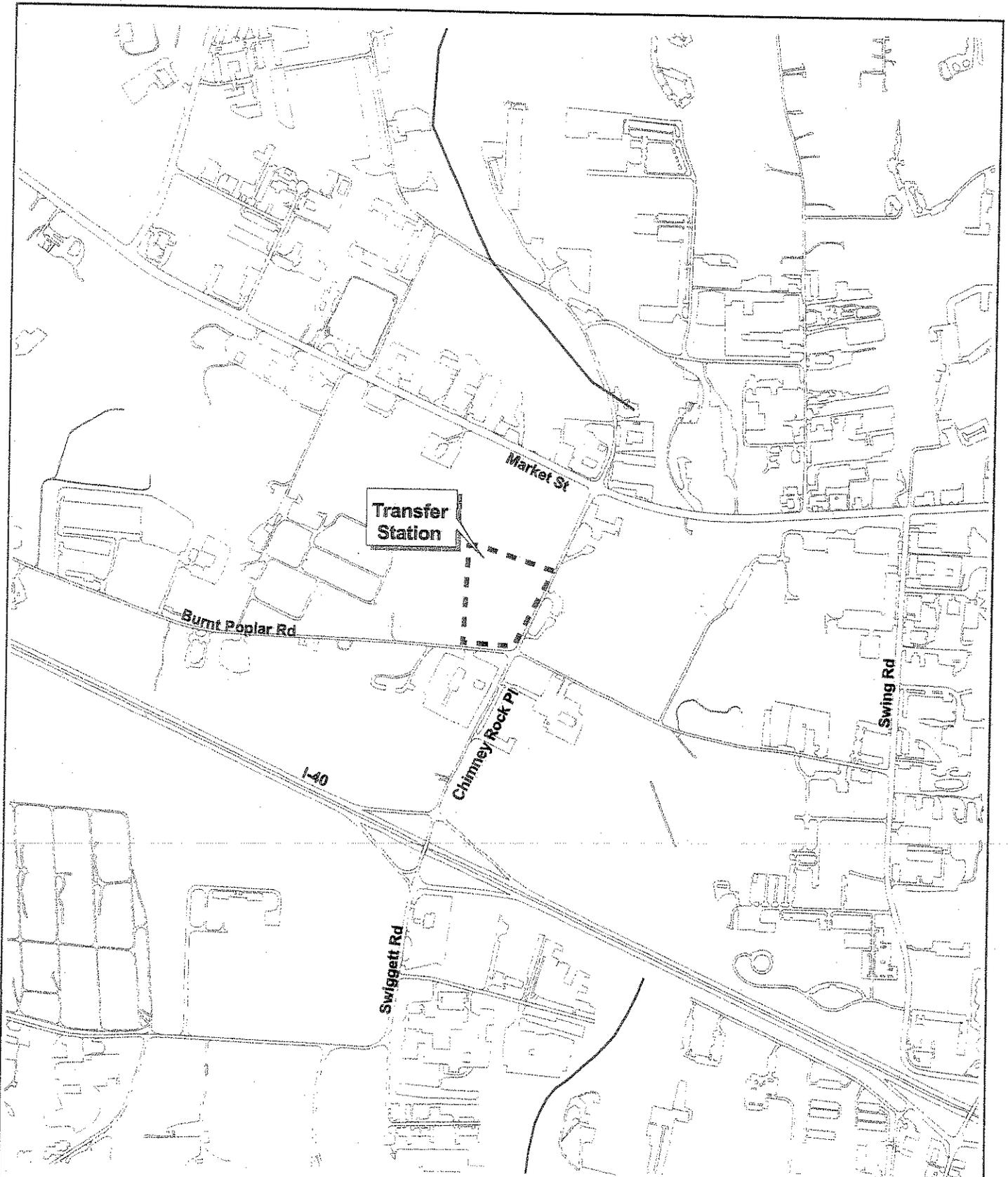


**Figure 1 - Site Key Map
Greensboro Transfer Station**

July 2003

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**Figure 2 - Site Vicinity Map
Greensboro Transfer Station**

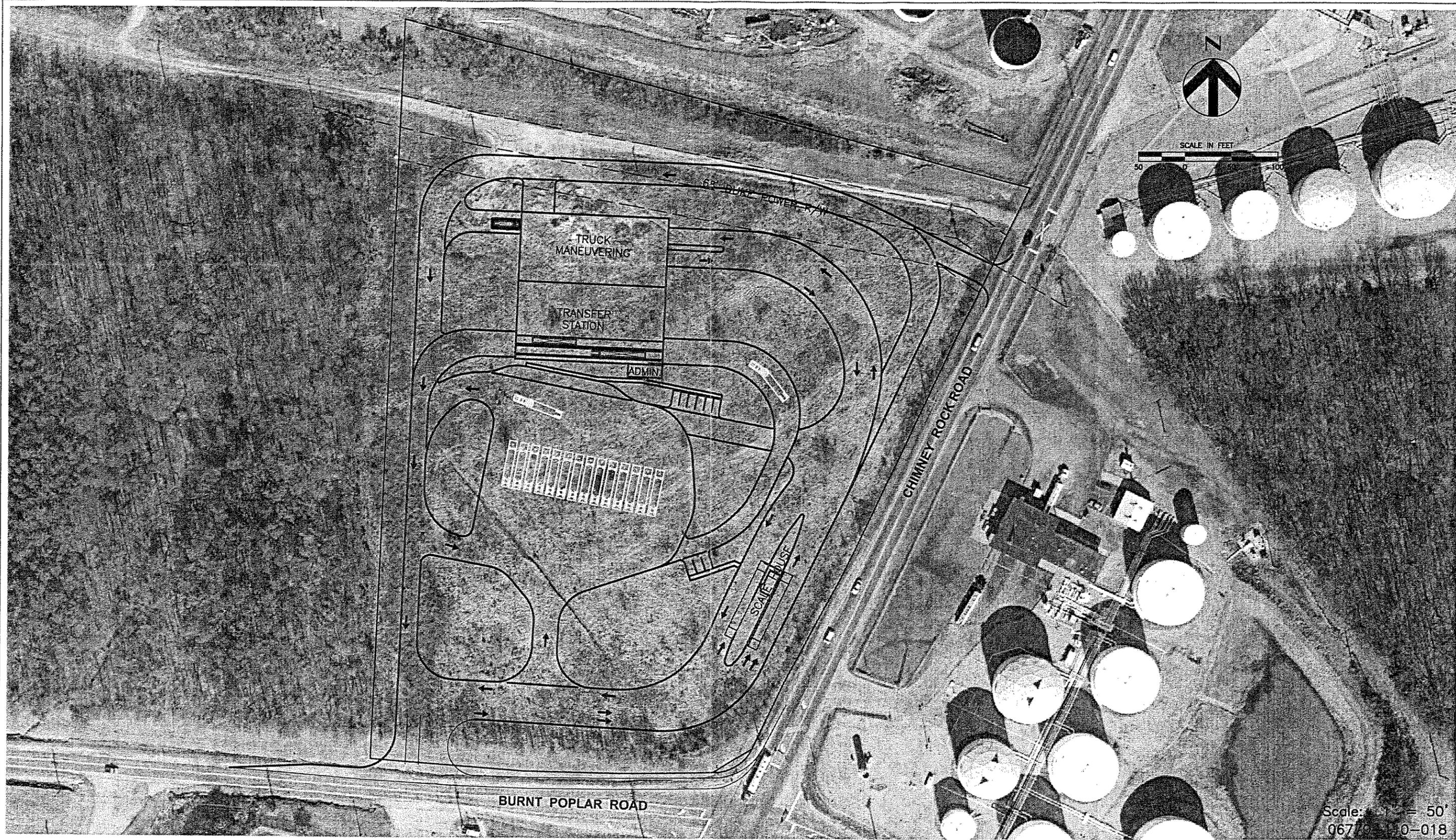
-  Transfer Station
-  Stream



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July 2003

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HDR Engineering, Inc.

**Greensboro Transfer Station
Preliminary Layout
Option A Revised**

Date
June, 2003

Sheet
Fig. 3

Scale: 1" = 50'
06770-0-018



Source: Soil Science at NC State University,
1998 Infrared Aerial Photo

July 2003



0 300 Feet
1 in. = 300 ft.

 Transfer Station
Property Boundary

 Jurisdictional
Wetland

**Figure 4 - Aerial Photo
Greensboro Transfer Station**

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RECEIVED
OCT 26 2000

NORTH CAROLINA DEPARTMENT OF ENVIRONMENT AND NATURAL RESOURCES
WINSTON-SALEM REGIONAL OFFICE
DIVISION OF WATER QUALITY

October 24, 2000

CERTIFIED MAIL: 7099 3220 0006 8502 5585
RETURN RECEIPT REQUESTED

Mr. Jim Booras
American Premium Beverage
6200-B Swing Ct.
Greensboro, NC 27404

SUBJECT: Randleman Lake Water Supply Watershed Regulations
American Premium Beverage Tract, Chimney Rock Rd. & Burnt Poplar Rd.
GBO 01
Guilford County

Dear Mr. Booras:

This letter is written in response to a request from Mr. Keith B. Price, Jr. of Samet Corporation, for the Division of Water Quality's determination of the applicability of the Randleman Lake Water Supply Watershed Regulations, 15A NCAC 2B .0250 - .0251, to the subject property. A site visit was conducted on October 20, 2000. Those in attendance were Jenny Rankin of this office, Keith B. Price, Jr., of Samet Corporation, and Jeremy Thomas of the City of Greensboro Water Resources Department.

Based on the October 20, 2000 site visit, this Office has determined that the portion of Feature A on the subject property (see enclosed map) is NOT SUBJECT to the Randleman Lake Water Supply Watershed Regulations, including both the Protection and Maintenance of Riparian Areas and Stormwater Requirements.

This letter addresses only the applicability of the Randleman Lake Water Supply Watershed Regulations. Please keep in mind that there may be additional Federal, State, and Local requirements for proposed activities at the subject property. If you have any questions regarding this matter, please contact Mrs. Jennifer Frye or myself at (336) 771-4600.

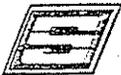
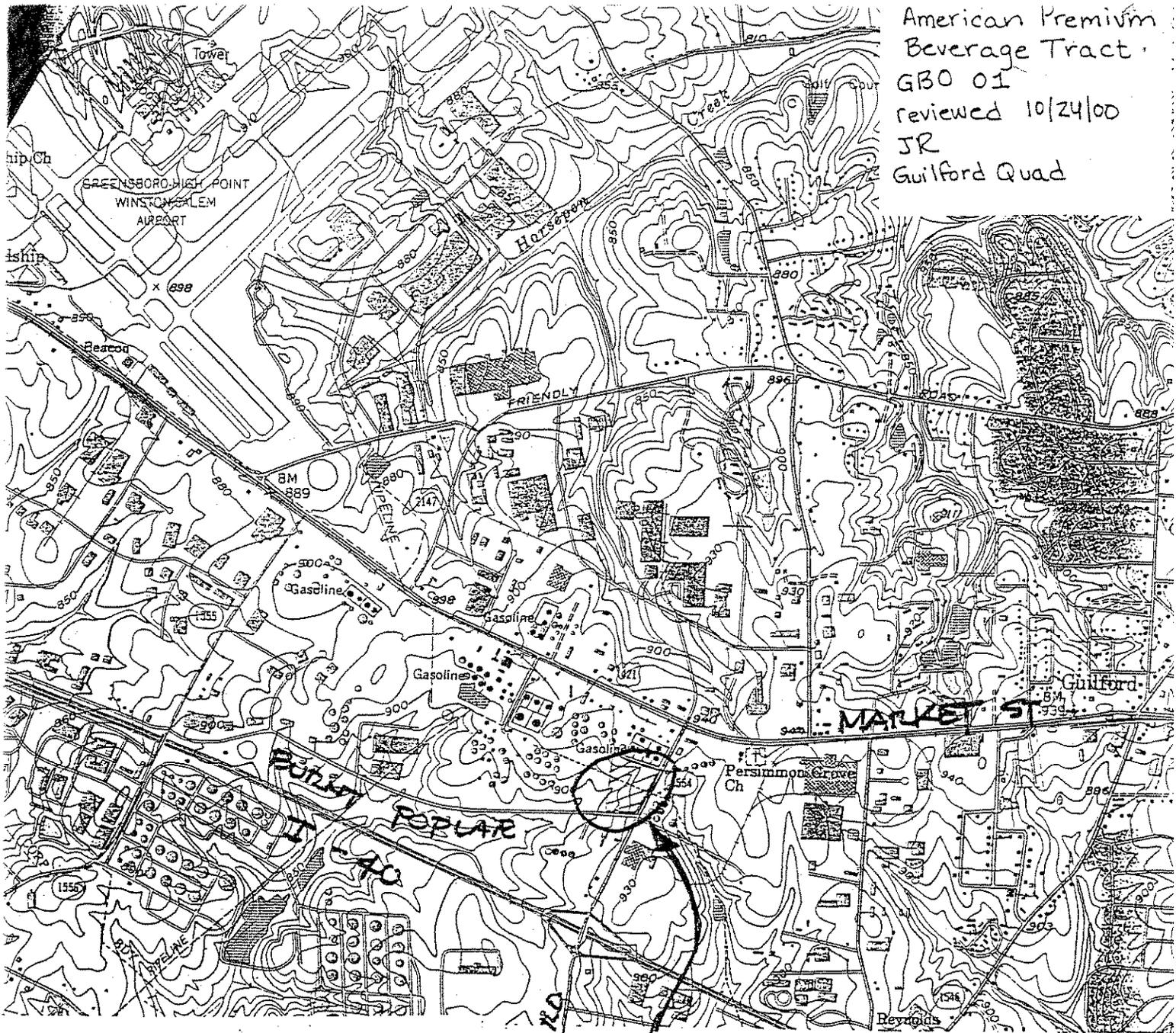
Sincerely,

Jenny Rankin

Jenny Rankin
Environmental Chemist

cc: Keith B. Price, Jr., Samet Corp.
Jeremy Thomas, City of Greensboro Water Resources Dept.
Bob Zarzecki, 401/Wetlans Unit- Central Office
WSRO

American Premium
Beverage Tract
GB0 01
reviewed 10/24/00
JR
Guilford Quad



SAMET CORPORATION

General Contractor • Real Estate Services

Keith B. Price, Jr., P.E.

Director of Preconstruction Services

309 Gallimore Dairy Rd.
Suite 102 (27409)
P.O. Box 8050
Greensboro, NC 27419

(336) 544-2600
Fax (336) 544-2638
e-mail: kprice@sametcorp.com

CHIMNEY ROCK RD

SITE

9.384 acres

1:2000

GUILFORD QUAD



NW CORNER OF INTERSECTION OF
BURNT POPLAR RD. & CHIMNEY ROCK ROAD

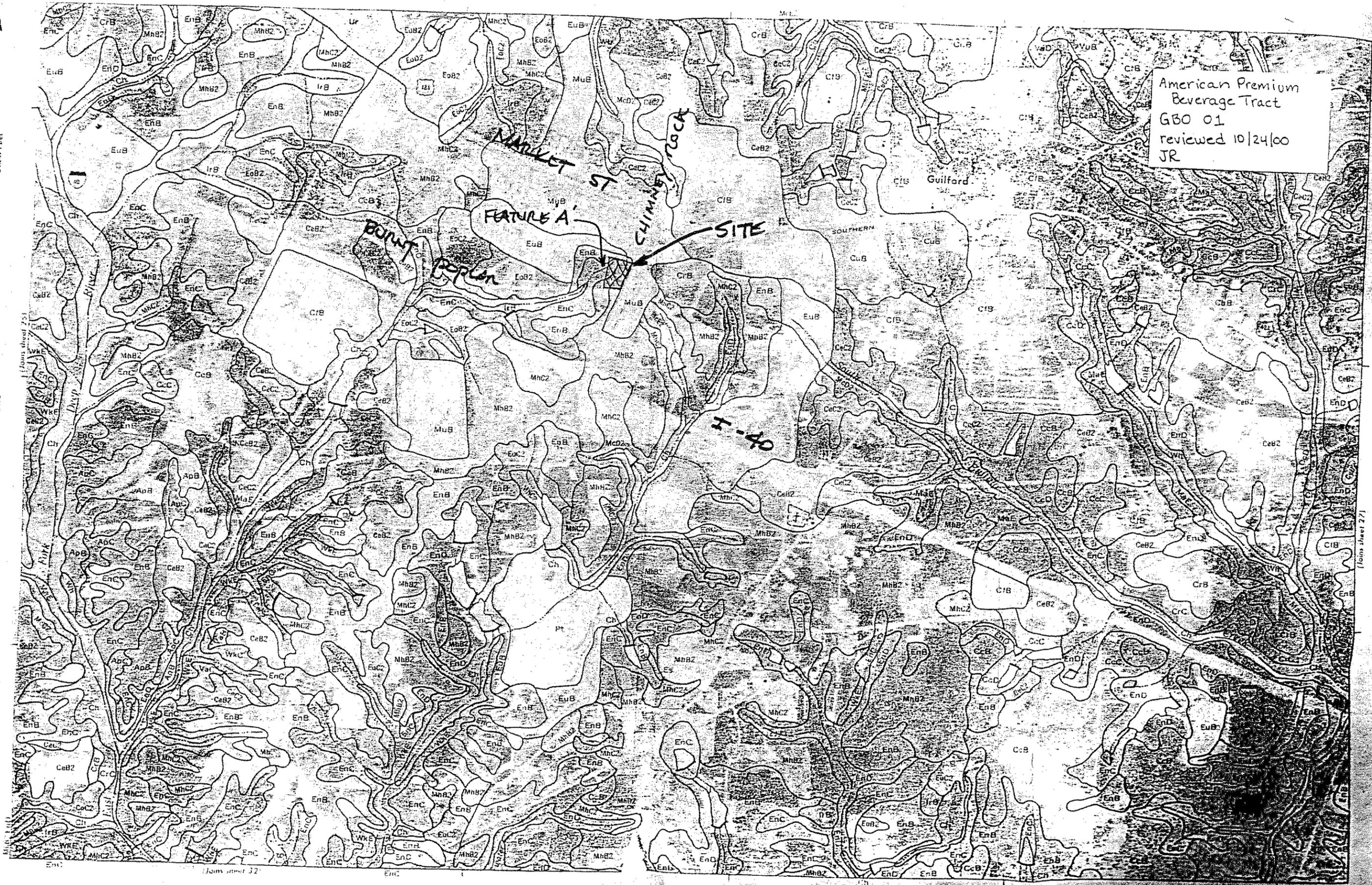
American Premium
Beverage Tract
GBO 01
reviewed 10/24/00
JR

MANULET ST
CHIMNEY ROCK
FEATURE A SITE

BOUNT
Poplon

1-40

Scale 1:20000



(Join sheet 27)

(Join sheet 32)



July 9, 2003

Ms. Renee Gledhill-Earley
North Carolina Department of Cultural Resources
4617 Mail Service Center
Raleigh, NC 27699-4617

Re: Greensboro Transfer Station
Greensboro, North Carolina
HDR Project No. 06770-2707-018

Dear Ms. Gledhill-Earley:

HDR Engineering, Inc. of the Carolinas (HDR) is working with the City of Greensboro to address the potential environmental constraints for the construction and operation of a municipal solid waste transfer station. The enclosed figure shows the parcel to be developed for the Greensboro Transfer Station.

Please review the enclosed material and respond with any concerns regarding potential impacts to archaeological or historical resources that need to be addressed during our environmental review, and any recommendations regarding the avoidance or mitigation of these impacts.

Should you have any questions or concerns, please feel free to contact me at (704) 338-6808. Thank you for your cooperation.

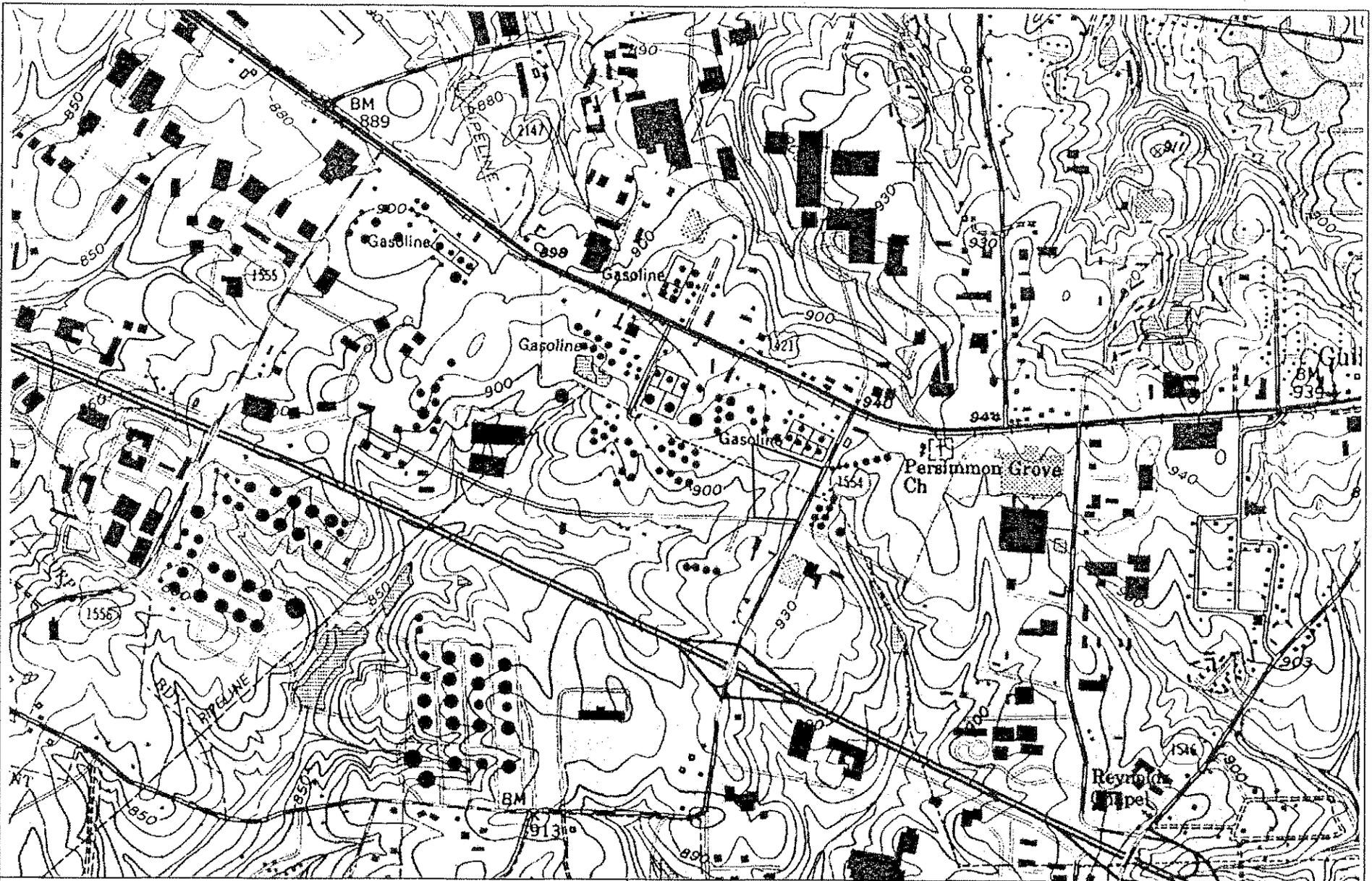
Respectfully,

Kerri Snyder
Environmental Scientist

KS/jvd

Enclosure

cc: Jeryl Covington, City of Greensboro
Joe Readling, HDR



— Approximate Study Area Limits
 Guilford Quadrangle, USGS

Figure 1: Study Area
 Greensboro Transfer Station
 Guilford County, North Carolina



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July 2003