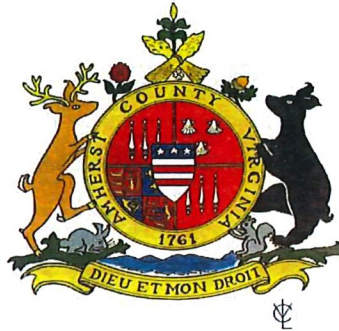


Board of Supervisors

L. J. Ayers III, Chair
District 3
Kenneth M. Campbell, Vice-Chair
District 1
David W. Pugh, Jr., Supervisor
District 4
Jennifer R. Moore, Supervisor
District 5
Claudia D. Tucker, Supervisor
District 2



County Administrator
Dean C. Rodgers

County Attorney
Michael W. S. Lockaby

AMHERST COUNTY BOARD OF SUPERVISORS
MINUTES – March 5, 2019

AGENDA

March 5, 2019
Administration Building - 153 Washington Street - Public Meeting Room
Amherst, Virginia 24521
Informal Luncheon – 12:00 p.m.
Meeting Convened - 1:00 p.m.

- I. Call to Order**
- II. Approval of Agenda**
- III. Invocation and Pledge of Allegiance**
- IV. Ordinance - First Reading**
 - A. Ordinance 2018-0006, implementing Zoning Administrator Variances and Interpretations
 - B. Ordinance 2018-0007, implementing Business-Friendly Parking and Residential Density Amendments
 - C. Ordinance 2019-0001, amending Special Exception code changes
 - D. Ordinance 2019-0003, parades, demonstrations and unlawful assembly
 - E. Ordinance 2019-0004, amending §§5-17 and 5-17.1. Chapter 5 – Elections, Article II. Election Districts and Central absentee election district.
- V. Citizen Comment**
- VI. Consent Agenda**
 - A. Minutes - February 5, 2019 and February 5, 2019 Budget Workshop
- VII. Old Business**
 - A. Landfill Options
- VIII. New Business**
 - A. Utility Easement
- IX. County Administrator's Report**
 - A. Boards/Commissions/Committees - upcoming vacancies
- X. County Attorney's Report**
- XI. Liaison and Committee Reports**

A. Lynchburg Regional Business Alliance Report

XII. Departmental Reports

A. Annual Report - Parks, Recreation & Cultural Development Board

XIII. Citizen Comment

XIV. Matters from Members of the Board of Supervisors

XV. Adjournment

MINUTES

At a Regular Meeting of the Amherst County Board of Supervisors and held at the Amherst County Administration building, Amherst, Virginia, thereof on Tuesday, the 5th day of March 2019, at 1:00 p.m., the following members were present:

BOARD OF SUPERVISORS:

PRESENT: L. J. Ayers III, Chairman
Kenneth M. Campbell, Vice-Chair
David W. Pugh, Jr., Supervisor
Jennifer R. Moore, Supervisor
Claudia D. Tucker, Supervisor

ABSENT: None

COUNTY STAFF: County Administrator Dean C. Rodgers
Deputy County Administrator David R. Proffitt
County Attorney Michael W. S. Lockaby
EA Clerk to Board Regina M. Rice
Planning/Zoning Director Jeremy Bryant
Finance Director Stacey Wilkes

OTHERS PRESENT: Ms. Lynn Klappich, Program Manager, Draper Aden Associates

I. Call to Order

Chairman Ayers called the meeting to order at 1:00 p.m.

II. Approval of Agenda

By motion of Supervisor Campbell and with the following vote, the Board approved the Agenda for March 5, 2019.

AYE: Mr. Ayers, Mr. Campbell, Mr. Pugh. Ms. Moore and Ms. Tucker
NAY: None
ABSENT: None

III. Invocation and Pledge of Allegiance

Chairman Ayers led the Invocation and Pledge of Allegiance.

IV. Ordinance - First Reading

A. Ordinance 2018-0006, implementing Zoning Administrator Variances and Interpretations

Planning/Zoning Director Jeremy Bryant addressed the Board and explained this ordinance would allow more flexibility to the variance process and allow the Zoning Administrator to set a \$50 fee to review these requests.

Mr. Bryant advised the proposed ordinance is a part of the Business-Friendliness Initiative that would allow the public a simpler process regarding a variance request.

Mr. Bryant advised the Planning Commission held a public hearing on February 21 and recommended approval of the Ordinance.

By motion of Supervisor Campbell and with the following vote, the Board directed staff to advertise Ordinance 2018-0006 for a public hearing.

AYE: Mr. Ayers, Mr. Campbell, Mr. Pugh, Ms. Moore and Ms. Tucker
NAY: None
ABSENT: None

B. Ordinance 2018-0007, implementing Business-Friendly Parking and Residential Density Amendments

Planning/Zoning Director Jeremy Bryant addressed the Board and advised the proposed ordinance was part of the Business-Friendliness Initiative that would allow a 25 percent reduction in parking and a 50 percent increase in density in the R-3 Multi-Family Residential District.

Mr. Bryant advised the Planning Commission held a public hearing on February 21 and recommended approval of the Ordinance.

By motion of Supervisor Tucker and with the following vote, the board directed staff to advertise Ordinance 2018-0006 for a public hearing.

AYE: Mr. Ayers, Mr. Campbell, Mr. Pugh, Ms. Moore and Ms. Tucker
NAY: None
ABSENT: None

C. Ordinance 2019-0001, amending Special Exception code changes

Planning/Zoning Director Jeremy Bryant addressed the Board and advised the Planning Commission held a workshop to review special exception uses that could be modified, removed or added to make Amherst County a more business friendly community. The Planning Commission then recommended those changes be added to the County ordinance.

By motion of Supervisor Moore and with the following vote, the Board directed staff to advertise Ordinance 2019-0001 for a public hearing.

AYE: Mr. Ayers, Mr. Campbell, Mr. Pugh, Ms. Moore and Ms. Tucker
NAY: None
ABSENT: None

D. Ordinance 2019-0003, parades, demonstrations and unlawful assembly

County Attorney Lockaby advised the proposed ordinance addresses parades and other public assemblies to be appropriately permitted to assure that public safety and local law enforcement are informed.

Supervisor Tucker asked if there has been a history in Amherst County where an illegal assembly or any event occurred that caused this ordinance to be formulated.

Mr. Lockaby understood there was a serious concern about an event to be held on the Courthouse yard or steps which generated safety concerns by the Sheriff's office.

By motion of Supervisor Tucker and with the following vote, the Board directed staff to advertise Ordinance 2019-0003 for a public hearing.

AYE: Mr. Ayers, Mr. Campbell, Mr. Pugh, Ms. Moore and Ms. Tucker
NAY: None
ABSENT: None

- E. E. Ordinance 2019-0004, amending §§5-17 and 5-17.1. Chapter 5 – Elections, Article II. Election Districts and Central absentee election district.

County Administrator Rodgers presented the proposed ordinance which would amend the County Code to change polling locations where existing landlords have asked the Electoral Board to move, and to accept leases on all polling locations.

By motion of Chairman Ayers and with the following vote, the Board directed staff to advertise Ordinance 2019-0004 for a public hearing.

AYE: Mr. Ayers, Mr. Campbell, Mr. Pugh, Ms. Moore and Ms. Tucker
NAY: None
ABSENT: None

V. Citizen Comment

Ms. Rosemary Urban of Monroe, Virginia, addressed the Board regarding a proposed “Re-Use Shed” that would collect reusable items at solid waste disposal locations.

Ms. Urban said five re-use sheds have been located in Nelson County and have demonstrated a high rate of success. She asked that the Board consider this option that would keep reusable items out of the county’s landfill. (See Attachment A)

Chairman Ayers asked the County Administrator to look into this proposal.

Ms. Sara Carter, Town Manager of the Town of Amherst, addressed the Board and requested that the Board consider a full service transfer station to accommodate dump trucks and commercial haulers. She was concerned about additional costs to citizens who use Town curbside collection.

VI. Consent Agenda

- A. Minutes - February 5, 2019 and February 5, 2019 Budget Workshop

By motion of Supervisor Campbell and with the following vote the Board approved the Consent Agenda for March 5, 2019.

AYE: Mr. Ayers, Mr. Campbell Mr. Pugh, Ms. Moore and Ms. Tucker
NAY: None
ABSENT: None

VII. Old Business

- A. Landfill Options

Ms. Lynn Klappich, Program Manager for Draper Aden presented a PowerPoint presentation regarding landfill options. She reported that Option 1 would be to continue with the current landfill and Option 2 would be to build a transfer station and haul waste to another location.

Ms. Klappich discussed the transfer station site options and direct haul options. She provided the Board with the advantages and disadvantages of maintaining the current landfill site and the possible Riverview Road site used as a transfer station.

She recommended that the Riverview Road site be eliminated for consideration of a transfer station, however, believed a convenience center would be possible at that site.

Ms. Klappich discussed Option 3 which was a direct haul that the county would be responsible to haul waste from convenience centers to a receiving facility. She discussed the hauling costs.

In conclusion, Ms. Klappich stated that a landfill is a perpetual construction project with continued monitoring and mandatory regulations. She said a transfer station would prove to maintain the same level of service and be the most efficient cost per ton. **(See Attachments B-1, B-2 and B-3)**

The Board continued its discussion.

Supervisor Pugh said the County should choose an option to keep the level of service of what we currently have.

Chairman Ayers said it was the consensus not to change the level of service.

Vice-Chair Campbell said we need to get the right information out and money to allow us to put in two to three convenience centers.

Supervisor Moore asked about what regulations the county would need to construct a transfer station.

Supervisor Tucker commented she was in favor of building a transfer station which would keep the level of service for the Town, Sweet Briar College and Madison Heights.

Supervisor Pugh said he was in favor of keeping landfill open. However, he said to suggest the landfill was a liability was based on speculation, and asked for the actual costs of a transfer station by going out with a RFP.

Chairman Ayers understood that large amounts of brush could still be deposited in the county's landfill by asking DEQ to keep the permit open.

By motion of Supervisor Tucker and with the following vote, the Board voted to proceed with closure of the existing landfill cell and undertake design and construction of a transfer station at the existing landfill site.

AYE:	Mr. Ayers, Mr. Campbell, Mr. Pugh, Ms. Moore and Ms. Tucker
NAY:	Mr. Pugh
ABSENT:	None
ABSTAIN:	None

VIII. New Business

A. Utility Easement

Deputy County Administrator David Proffitt addressed the Board regarding an agreement and easement with Central Virginia Electric Cooperative to provide electrical service to the Dodd's Store Convenience Center site. He asked the Board for authorization to have the County Administration execute the agreement and the associated easement.

By motion of Chairman Ayers and with the following vote, the Board authorized execution by the County Administrator of the Central Virginia Electric Cooperative agreement to provide power to the Dodd's store Solid Waste Convenience Center and its associated easement.

AYE: Mr. Ayers, Mr. Campbell, Mr. Pugh, Ms. Moore and Ms. Tucker
NAY: None
ABSENT: None

IX. County Administrator's Report

A. Boards/Commissions/Committees - upcoming vacancies

For the Board's information.

X. County Attorney's Report

County Attorney Lockaby advised the Board he received the proposed language from Comcast for a revised cable franchise agreement with the county. He asked if the Board would like to have this as an item on the agenda to explain and receive input from the Board, or to go forward with negotiation.

It was the Board's consensus to proceed with the negotiation.

Mr. Lockaby advised he received several requests from attorneys representing landowners regarding conservation easements in the county.

He advised there are costs and difficulties involved, but a willingness to work with people on conservation easements. He suggested contacting the Agricultural extension office to provide the Board with a presentation on conservation easements.

It was the Board's consensus to proceed.

Supervisor Tucker asked the County Administrator to notify the AG committee.

XI. Liaison and Committee Reports

A. Lynchburg Regional Business Alliance Report

For the Board's information.

XII. Departmental Reports

A. Annual Report - Parks, Recreation & Cultural Development Board

For the Board's information.

XIII. Citizen Comment

Mr. Bill Peters of Amherst, Virginia requested a copy of the RFP concerning the landfill and all associated matters.

XIV. Matters from Members of the Board of Supervisors

Supervisor Tucker had no matter to discuss.

Supervisor Moore had no matter to discuss.

Supervisor Pugh had no matter to discuss.

Vice-Chair Campbell had no matter to discuss.

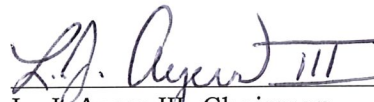
BOOK 36
MINUTES – March 5, 2019
Page | 678

Chairman Ayers advised he attended a Beautification Committee meeting last week. The committee asked about using the ACSA water tower to display the Amherst County logo as well as ways making changes to the appearance of the Madison Heights area.

XV. Adjournment

By motion of Vice-Chair Campbell and with the following vote, the Board adjourned at 2:25 p.m.

AYE: Mr. Ayers, Mr. Campbell, Mr. Pugh, Ms. Moore and Ms. Tucker
NAY: None
ABSENT: None



L. J. Ayers III, Chairman
Amherst County Board of Supervisors



Dean C. Rodgers, Clerk

A

PEDLAR VALLEY GARDEN CLUB RE-USE SHED PROPOSAL

PROPOSAL: The county of Amherst in collaboration with the *Pedlar Valley Garden Club will construct a 6x8 re-use shed at the Pedlar Mills Collection Site.

PURPOSE : Many county residents are throwing good, reusable items in the trash bins. Once an item is placed in a bin, it is considered contaminated and scavenging is discouraged. These reusable items then become part of the county land fill. Numerous items can be used by county residents.

HISTORY: Based on the success of the five re-use sheds in Nelson County, installing a shed has a high probability of success.

First Nelson County Shed installed: 2005 (Shipman). Four other sheds installed in 2008 (Rockfish, Faber, Massies Mill, Montebello).

Funding: The Nelson County sheds were funded by the litter grant provided to each county from recycling income and donations. The recycle grant must be applied for. The Pedlar Valley Garden Club is willing to write the necessary proposal.

Maintenance: The shed will be maintained by the county employees, already at the site. Items not suitable for the shed will be discouraged (TVs, clothing, appliances).

Savings: Based on a Nelson County survey, approximately 23 tons of reusable items were kept out of the County landfill.

Concerns: In the 13 years the Nelson sheds have been in existence, there has only been one reported altercation. This was quickly settled by the County employee. If the re-use shed does not prove its value to the county, the 6x8 building can be removed and used elsewhere.

Questions? Contact Rosemary Urban, 434-770-0749 or Faye Brown 434-229-5660.

*The Pedlar Valley Garden club has been in existence since 1954. In addition to its other philanthropic activities, the Club was instrumental in working with VDOT in choosing a design for the 643 bridge in Pedlar Mills.





Draper Aden Associates

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B-1

Memorandum

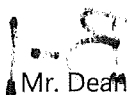
To: Mr. Dean Rodgers, Amherst County Administrator
From: Ms. Lynn P. Klappich, Program Manager
Date: March 4, 2019
Project Name: Amherst Options Evaluation
Project Number: B05176-109/109B
Subject: Comparison of Transfer Station Options
cc: Board of Supervisors, David Proffitt, Keith Stevens, Don Marickovich

As requested, Draper Aden Associates has considered several options for the location of a transfer station in Amherst County. For this evaluation, it was assumed that any options would receive the current tonnage received at the landfill, an average of 24,600 tons per year and that the facility would need to be constructed, permitted and operational in two years \pm .

Two sites were chosen for this evaluation. The first site (Option 1) was the landfill site at a location within the facility property as generally identified in our original report dated May 15, 2018. There is significant area at the landfill for placement of a transfer station without limiting use of the site for future solid waste operations. The second site (Option 2) was located on Riverview Road at an older landfill site identified in VDEQ records as Permit 216. See location maps provided in Attachment 1.

Draper Aden Associates met with the County staff and representatives of the Virginia Department of Transportation for preparation of this memorandum on February 19, 2019. We have also been in communication with VDEQ relative to the Riverview Road site.

Based on just the site locations, a table included in Attachment 2 was prepared to summarize the advantages and disadvantages for each option. Review of this table will indicate that the primary advantage of the landfill site is the available area and existing infrastructure, while the primary advantage of the Riverview Road site is its proximity to a major primary road (Route 29). The disadvantage of the landfill site is potentially the transportation routes to the site, while the disadvantages of the Riverview Road site include its previous usage as a landfill, higher risk, and limited space.



Because of the location, each site comes with a different set of design criteria. Key design elements or assumptions for each option are summarized in a table in Attachment 2. A key difference between Option 1 and 2 is the use of a passive load system for Option 1 and a mechanical/compactor loading system for Option 2. Information on the Marathon compaction equipment including schematic and quote are included in Attachment 3.

Conceptual layouts for each facility have been completed and are included in Attachment 4 to this memorandum.

- Figure CP-1A – Option 1A - Concept Plan – Landfill Site – original report layout - Plan
- Figure CP-1B – Option 1B - Concept Plan – Landfill Site – modified to east – Plan
- Figure CP-2A – Option 2 - Concept Plan – Riverview Road – Western site – Plan

Table 1 summarizes the earthwork and construction quantities bases on the conceptual layouts.

TABLE 1
AMHERST COUNTY TRANSFER STATION EVALUATION
EARTHWORK AND CONSTRUCTION CONCEPTUAL QUANTITIES

ITEM	OPTION 1 Existing Landfill (Cell 3/4 area)	OPTION 2 Riverview Road site West side
Subsurface investigation	Standard for foundation design	Atypical Will need to identify waste location, waste depth and depth/type of cover
Wetland permitting	None required	Potentially required. Delineation will be needed if impact to the ravine.
Building	No changes from previous report	Foundation will be significantly more expensive if waste found under facility.
Compaction equipment	Not required	Assumed to be required to reduce cut
Infrastructure		
Entrance improvements	Required	Required

ITEM	OPTION 1 Existing Landfill (Cell 3/4 area)	OPTION 2 Riverview Road site West side
Landscaping plan	Not required	Required
Scales and scalehouse	Not required although relocation may be preferable	Required
Office	Not required	Required
Sewer or septic	At office	Not known at this time
Water	At office	Public water appears to be available
Estimated total area of disturbance	8+ acres	7+ acres
Access Road	2,200± lf	2,300± lf
Concrete staging pad	9,500± sf	10,000± sf
Trailer Storage areas	Significant area available	Very limited area
Excavation (exclusive of sediment basins)	7,200± cy Can be used for fill	6,100± cy Assumed waste/soil mix that would need to be transported to landfill for disposal.
Fill	21,300± cy On-site material	62,800± cy Off-site material
Major storm drain piping	Not required	285± lf
Chain link fencing - frontage	Not required	2,100± lf
Woven wire fencing	Not required	4,300± lf

Based on these conceptual plans as referenced above and the estimated quantities, we have prepared conceptual costs for each option as summarized in the table below. It is assumed that each structure regardless of option would be approximately 8,000 square feet. Site work includes site preparation, erosion control and stormwater management, road construction, fencing, landscaping, and electrical. Site work includes a 10% contingency. Compaction equipment cost provided by Marathon. Building cost and special foundation provided by architect.

TABLE 2
AMHERST COUNTY TRANSFER STATION EVALUATION
CONCEPTUAL CAPITAL COSTS

ITEM	OPTION 1 Existing Landfill (Cell 3/4 area)	OPTION 2 Riverview Road site West side
Building	\$820,000±	\$820,000±
Special foundation	Not required	\$300,000±
Landfill gas control system	Not required	\$30,000±
Compaction equipment	\$0	\$330,000±
Entrance improvements	\$100,000	\$120,000
Scales and scalehouse	Not required	\$250,000
Sitework	\$1,120,000	\$2,717,000
Subtotal	\$2,040,000	\$4,567,000
Engineering and permitting	\$200,000	\$300,000
TOTAL	\$2,240,000	\$4,867,000

Table 2 indicates that the Riverview Road site development costs will exceed the current loan. Based on this conceptual analysis and considering the risks associated with development at the Riverview Road site, the Riverview Road site was dropped from further consideration for use as a transfer station. However, the Riverview Road site does appear to be suitable for use as a convenience center site which would require much less infrastructure and disturbance to the site.

ATTACHMENTS:

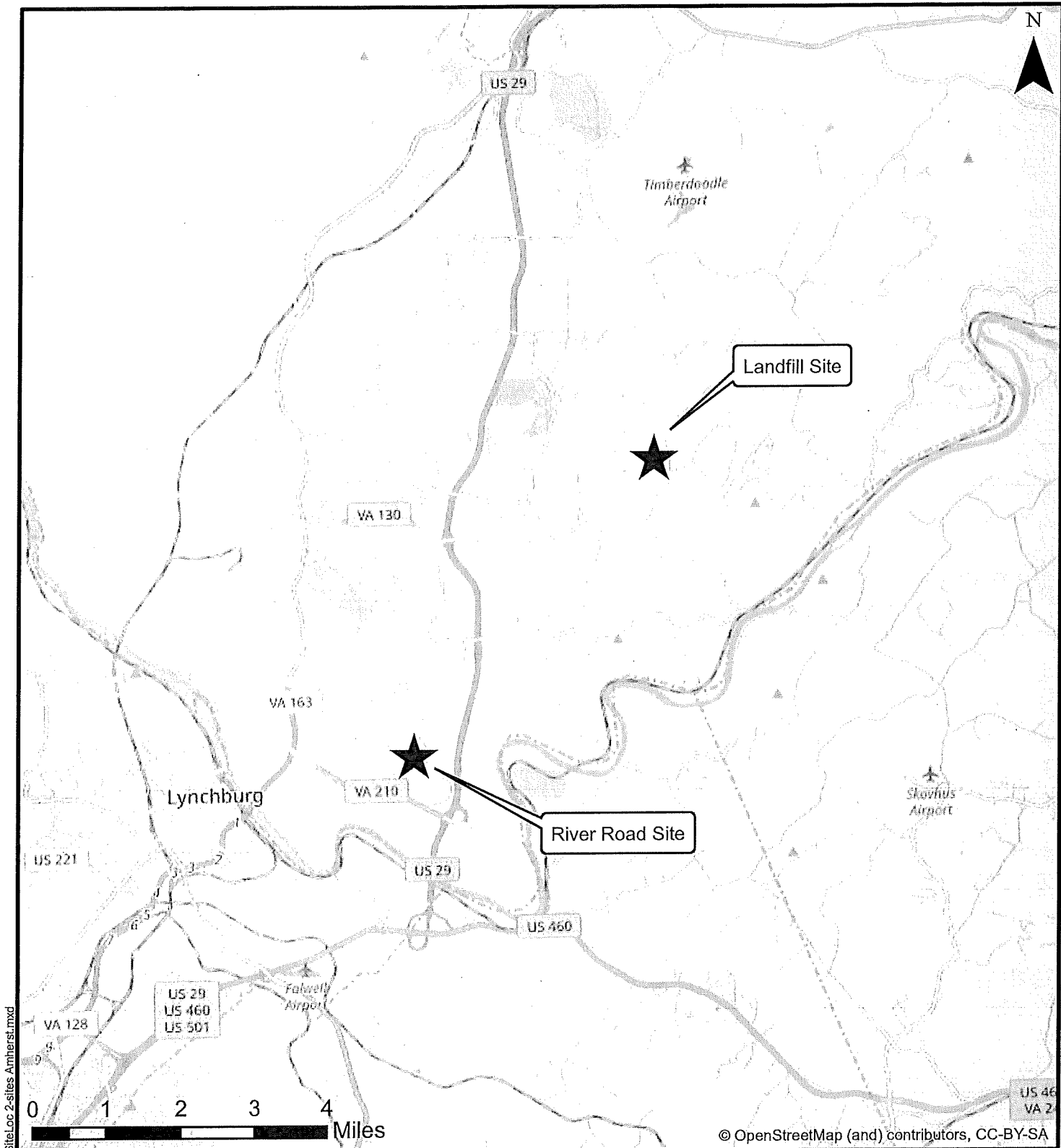
Attachment 1 – Location maps

Attachment 2 – Advantages and Disadvantages of sites and Design Criteria

Attachment 3 – Marathon Equipment Information

Attachment 4 – Conceptual Layouts

Attachment 1
Location maps



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© OpenStreetMap (and) contributors, CC-BY-SA

Site Locations

Two Sites
Amherst Co, Va

SCALE: 1:120,000

PROJECT: B05176-109B



Draper Aden Associates

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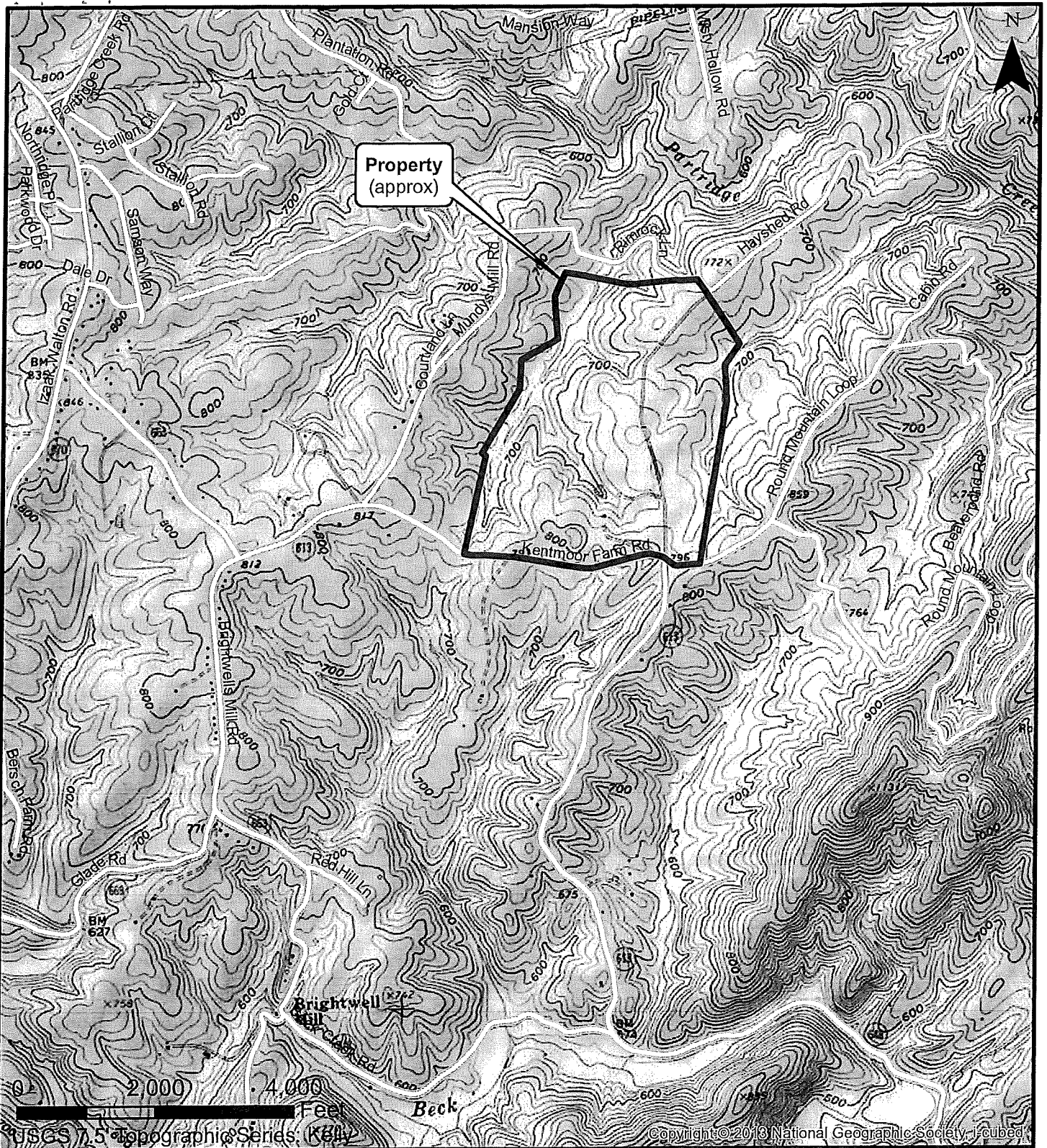
2206 South Main Street
Blacksburg, VA 24060
540-552-0444 Fax: 540-552-0291

Richmond, VA
Charlottesville, VA
Hampton Roads, VA

Raleigh, NC
Fayetteville, NC
Northern Virginia

DESIGNED: LPK
DRAWN: SMF
CHECKED: LPK
DATE: 2-25-19

FIGURE
1



Site Location

Amherst County Active Landfill
DEQ Permit #563
Rt.613 - Kentmoor Farm Rd - Amherst Co, Va

SCALE: 1" = 2000'

PROJECT: B05176-109B



Draper Aden Associates

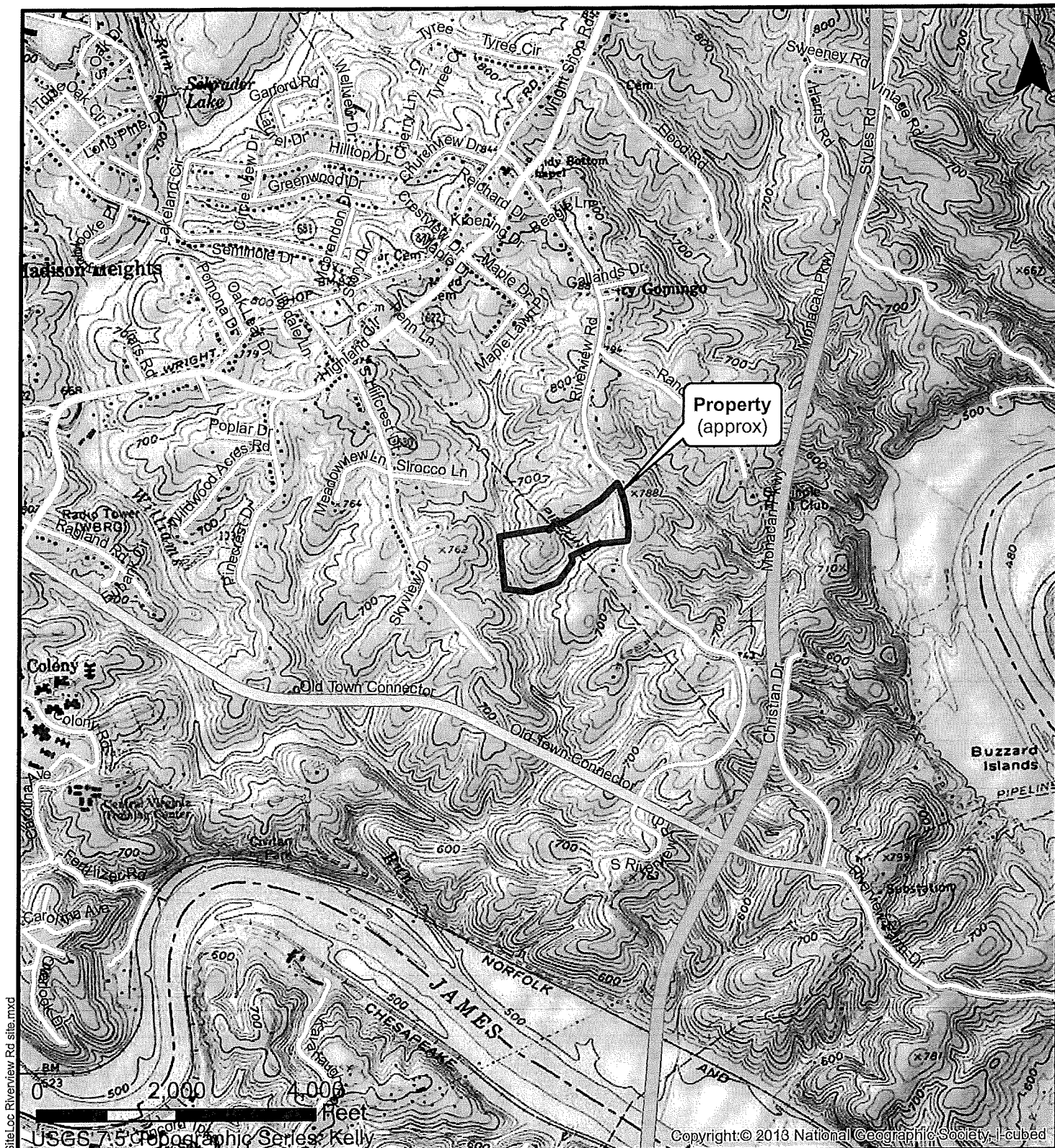
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Richmond, VA
Charlottesville, VA
Hampton Roads, VA
Raleigh, NC
Fayetteville, NC
Northern Virginia

DESIGNED: LPK
DRAWN: SMF
CHECKED: LPK
DATE: 2-25-19

FIGURE
2



Site Location

Parcel 161-A-118
Riverview Road
Amherst Co, Va

SCALE: 1" = 2000'

PROJECT: B05176-109B



Draper Aden Associates

Engineering • Surveying • Environmental Services

2206 South Main Street
Blacksburg, VA 24060
540-552-0444 Fax: 540-552-0291

Richmond, VA
Charlottesville, VA
Hampton Roads, VA
Raleigh, NC
Fayetteville, NC
Northern Virginia

DESIGNED: LPK
DRAWN: SMF
CHECKED: LPK
DATE: 2-25-19

FIGURE
3

Attachment 2
Advantages and Disadvantages of Sites
And
Design Criteria

**AMHERST COUNTY TRANSFER STATION ANALYSIS
COMPARISON OF ADVANTAGES AND DISADVANTAGES
LANDFILL AND RIVERVIEW ROAD SITES**

	LANDFILL SITE	RIVERVIEW ROAD SITE
ADVANTAGES	<ol style="list-style-type: none"> 1. Within the boundaries of a previously permitted landfill site on undisturbed ground. 2. Office, scales and scalehouse exist. 3. Utilities exist. 4. Fill material is available. 5. Personnel at transfer station can address other activities e.g. brush handling, landfill maintenance, leachate hauling, stormwater management etc. 	<ol style="list-style-type: none"> 1. Closer access to primary route; shorter distance on secondary roads. 2. Riverview Road posted at 25 mph in vicinity of site. 3. Potentially fewer residential properties impacted. 4. Closer to major waste generation area in Madison Heights.
DISADVANTAGES	<ol style="list-style-type: none"> 1. Longer travel distance on secondary roads required to reach site. 2. Per VDOT, facility entrance will need improvements to address heavier usage by transfer trailers. 	<ol style="list-style-type: none"> 1. Site was previously used for waste disposal. Design would require determination of location of waste materials. 2. Construction on waste would require additional design elements. To minimize excavation, a mechanical compactor loading system was considered. 3. Waste may need to be excavated and removed from site during grading operations. Will require transport to landfill for disposal. Costs include this assumption. 4. Significant fill required to reduce potential need for waste excavation. No fill material available on site based on previous use of site for waste disposal. 5. Power line and water line running parallel to site. 6. Gas pipeline and major drainage area bisect site limiting usage to eastern half of site.

**AMHERST COUNTY TRANSFER STATION ANALYSIS
COMPARISON OF ADVANTAGES AND DISADVANTAGES
LANDFILL AND RIVERVIEW ROAD SITES**

	LANDFILL SITE	RIVERVIEW ROAD SITE
		<p>7. DEQ permitting more extensive for disturbance of site.</p> <p>8. Additional personnel may be needed to handle operations at existing landfill after closure e.g. brush, metal recycling, landfill cover maintenance and stormwater management, leachate hauling.</p>

**AMHERST COUNTY
TRANSFER STATION EVALUATION
DESIGN CRITERIA AND ASSUMPTIONS
OPTIONS 1 AND 2**

Option 1 – Key design requirements or assumptions for the landfill site:

- Passive load system will be used to load the haul trailers e.g. garbage trucks will dump onto a covered tipping floor and a wheel loader will push the waste into a transfer trailer.
- Approximate grade break (tipping floor to haul trailer base grade) is 12 – 16 feet.
- Size of building is 8,000 square feet.
- Scales, scalehouse and office in place. Optimally, if the facility is moved further to the east (Option 1B) the scales may be relocated.
- VDOT indicated that significant improvements at the landfill entrance will be required to reduce impact to Kentmoor Farm Road. They expressed concern about a tractor trailer turning into an oncoming lane. They indicated that they do not have any jurisdiction over off-site improvements which are the County's consideration.
- VDEQ will require a permit by rule for the facility. A public comment period will be required. This is standard permitting for a transfer station.
- A convenience center is possible with access a potential challenge depending on the location of the transfer station. There are multiple options for a convenience center at the site.
- Personnel at the transfer station can support other activities at the landfill.

Option 2 – Key design requirements or assumptions for the Riverview Road site:

- The site is bisected by a gas line and drainage ravine. Based on records and review of old USGS topographic surveys it appears that waste was placed on both sides of the gas line and drainage ravine. The east area was an unpermitted landfill. The west area was permitted with the Virginia Department of Health as Permit 216. The western facility apparently stopped accepting waste in 1981. It is unknown how either site was covered and closed.
- The limits of waste and cover materials in either area are unknown. An operational plan does exist for Permit 216 which indicates a series of trenches but actual operation of this facility is unknown. Design assumed limited excavation and design of a "floating" slab for the facility.
- Because of the lack of information on the limits of waste and cover materials, development of this area would require minimal excavation and extreme care during any construction.
- VDEQ will require a permit by rule for the facility. VDEQ has indicated that there are no specific regulatory requirements for the design and permitting of a transfer station on this site e.g. no specific siting restrictions. They noted that all risk will be assigned to the County and should there be any evidence of environmental issues potentially related to

**AMHERST COUNTY
TRANSFER STATION EVALUATION
DESIGN CRITERIA AND ASSUMPTIONS
OPTIONS 1 AND 2**

the old landfill that may develop during construction or operation, VDEQ will have the authority to revisit the transfer station permit by rule and regulatory requirements. During permitting, VDEQ will pay attention to proposed mitigation activities. A public comment period will be required.

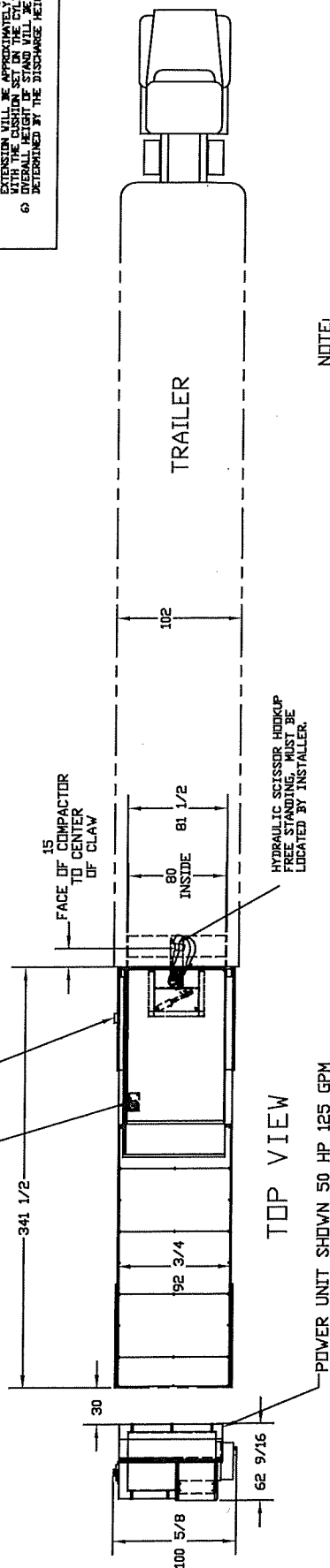
- To reduce the excavation and grading costs, an alternative loading operation was considered. This operation would require a mechanical compactor unit. The grade break could be reduced to 5 - 10 feet (conceptual design assumed a 5 foot grade break). An alternative would be to load the transfer trailers directly but this would require a loader capable of reaching 10 - 12 feet high for loading. Marathon Equipment was contacted relative to the most effective equipment given the tonnage. They recommended the use of an M-series, Model 1050 with 10 cy hopper and a 38 second cycle time. The estimated cost for this equipment is \$330,000± (including an estimate for installation). This equipment will require 3-phase power. Information on this equipment is provided in Attachment 3 to this memorandum.
- The size of the building was assumed to be 8,000 square feet.
- Scales, scalehouse and office would need to be constructed.
- Per VDOT, even though the stretch of Riverview Road this site fronts is posted at 25 mph, and even with all trailers coming in and exiting in the same direction, VDOT anticipated significant entrance improvements to reduce impact to Riverview Road.
- Per the County Planning Department, a landscaping plan would be needed.
- A water line and power line parallel Riverview Road and will need to be considered for development. The water line may need to be cased; power line pole locations may need to be re-located.
- A convenience center is possible with or without a transfer station but there is limited space for its location. If the convenience center is combined with a transfer operation, traffic could be congested.
- No additional operations could be considered at this site.
- All fill material would need to be transported from an off-site source.
- Personnel at the transfer station will not be able to support landfill activities.

Attachment 3
Marathon Equipment Information

EQUIPMENT REQUIRED

- 11) M-1050XW RAWHIDE HORIZONTAL COMPACTOR
22) HYDRAULIC SCISSOR
33) PLATFORM TO ELEVATE COMPACTOR,
43) POWER MODULE 9-50-125
53) 3-SIDED RIGHT SIDE HOPPER

3 HP POWER PACK FOR HYDRAULIC RETRACTABLE CLAW TO BE LOCATED UNDERNEATH PLATFORM

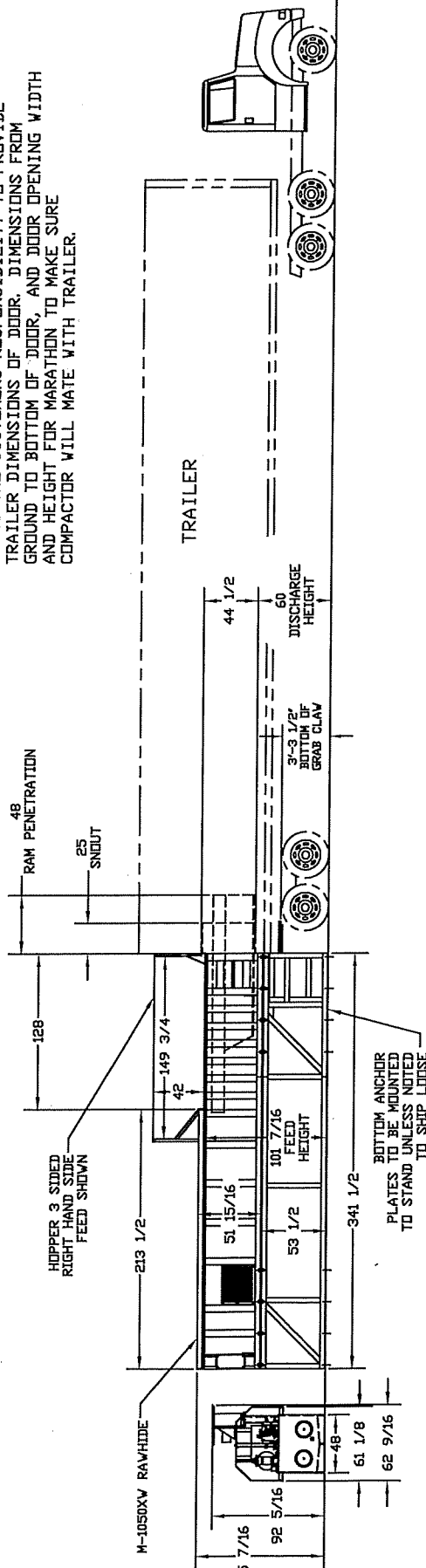


TOP VIEW

POWER UNIT SHOWN 50 HP 125 GPM

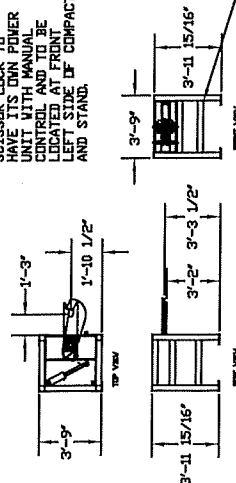
ETON

IT IS THE CUSTOMERS RESPONSIBILITY TO PROVIDE TRAILER DIMENSIONS OF DOOR, DIMENSIONS FROM GROUND TO BOTTOM OF DOOR, AND DOOR OPENING WIDTH AND HEIGHT FOR MARATHON TO MAKE SURE COMPACTOR WILL MATE WITH TRAILER.



SIDE VIEW

CISSOR LOCK TO
HAVE ITS OWN POWER
UNIT WITH MANUAL
CONTROL AND TO BE
LOCATED AT FRONT
LEFT SIDE OF COMPACTOR
AND STAND.



УТВЕРЖДАЮ: _____

HYDRA III TC 111

ALL POWER UNITS 50 HP AND ABOVE SHIP WITHOUT HYDRAULIC FLUID. IT IS THE SOLE RESPONSIBILITY OF THE PURCHASER AND/OR END-USER OF THIS EQUIPMENT TO PROVIDE THE REQUIRED HYDRAULIC FLUID. See the Operation Manual for the unit for acceptable hydraulic fluids.

- ☐ APPROVED - MANUFACTURING MAY PROCEED.
☐ APPROVED, EXCEPT AS NOTED - RESUBMIT DRAWING, MANUFACTURING MAY PROCEED.
☐ NOT APPROVED - CORRECT DRAWING AS

NOTED AND RESUBMIT.
APPROVED BY:
COMPANY:
DATE:
WEIGHT CAPACITY:
CYCLES PER DAY:

NOTE: APPROVED COPY OF THIS DRAWING MUST BE RECEIVED TO BEGIN MANUFACTURE OF UNIT.

This drawing, and all of the information and rights embodied and contained herein, constitutes Confidential, proprietary information and trade secrets of Marathon Equipment Company. You are not permitted to use, disclose, distribute, copy, transmit, license, create derivative works from or otherwise reproduce this drawing in whole or in part except as authorized, in writing, by Marathon Equipment Company. You agree to immediately return this drawing and any copies or reproductions thereof upon request by Marathon Equipment Company.

3. 11

M-1050XW RAWHIDE, PLATFORM, HYDRAULIC
SCISSOR HOOKUP, 3 SD RH HOP, TRAILER

DR. BS

CK.	APP.
-----	------

DATE: 2/19/2019

SCALE: 3/8"=1'

TOL:

DRAWING NO.

75848



MARATHON EQUIPMENT COMPANY

PO Box 1798

Vernon, AL 35592

Phone: (205) 695-9105 Fax: (205) 695-9150

Toll Free: (800) 633-8974

Quotation Information

Regional Sales Manager: Shawn Gottwald
Regional Sales Manager Email: shawn.gottwald@marathonequipment.com
Regional Sales Manager Phone: 205-712-7270
Inside Sales Coordinator: Lori Williams

Quote Date: 2/26/2019
EXPIRES: 3/28/2019

Valid 30 Days
Unless Otherwise Noted

QUOTATION NO:

SG 22219 241

Sold To: Amherst County

Ship To: Amherst County

Address:

Address:

Address:

Address:

City / State / Zip: Amherst VA 24521

City / State / Zip: Amherst VA 24521

Country:

Attn:

Phone:

Contact:

Phone:

Email:

QUANTITY	DESCRIPTION	LIST PRICE	DISCOUNT %	DISCOUNT \$	NET PRICE (*QTY)	SURCHARGE %	SURCHARGE \$
1	M-1050XW	\$ 114,267.00	0.0%	\$ -	\$ 114,267.00	3.0%	\$ 3,428.01
1	Rawhide Option	\$ 27,319.00	0.0%	\$ -	\$ 27,319.00	3.0%	\$ 819.57
1	M-1050XW Stand	\$ 20,405.00	0.0%	\$ -	\$ 20,405.00	3.0%	\$ 612.15
UNIT OPTIONS (SPECIFY IF CUSTOM)							
1	MODEL 9-50100G Power Unit	\$ 95,023.00	0.0%	\$ -	\$ 95,023.00	3.0%	\$ 2,850.69
1	9" Bore Cylinder	\$ -	0.0%	\$ -	\$ -	3.0%	\$ -
1	50HP Motor	\$ -	0.0%	\$ -	\$ -	3.0%	\$ -
1	100 GPM Pump	\$ -	0.0%	\$ -	\$ -	3.0%	\$ -
1	Fixed scissor claw trailer connection	\$ 15,135.00	0.0%	\$ -	\$ 15,135.00	3.0%	\$ 454.05
1	Standard 3 Sided Side Feed Hopper	\$ 5,566.00	0.0%	\$ -	\$ 5,566.00	3.0%	\$ 166.98
1	Standard Oil Cooler	\$ -	0.0%	\$ -	\$ -	3.0%	\$ -
1	3 Sided Hopper	\$ 4,316.00	0.0%	\$ -	\$ 4,316.00	3.0%	\$ 129.48
1	Remote Controls on 13' Sealtite	\$ -	0.0%	\$ -	\$ -	3.0%	\$ -
1	Pressure Gauge mounted on Panel Box Frame	\$ 287.00	0.0%	\$ -	\$ 287.00	3.0%	\$ 8.61
1	Tongue and groove floor	\$ 7,847.00	0.0%	\$ -	\$ 7,847.00	3.0%	\$ 235.41
1		\$ -	0.0%	\$ -	\$ -	3.0%	\$ -
1		\$ -	0.0%	\$ -	\$ -	3.0%	\$ -
1		\$ -	0.0%	\$ -	\$ -	3.0%	\$ -
1		\$ -	0.0%	\$ -	\$ -	3.0%	\$ -
SUBTOTAL OF EQUIPMENT AND OPTIONS		\$ 290,165.00		\$ -	\$ 290,165.00		\$ 8,704.95

Standard Equipment Options

Standard Features Include: Remote Power Pack with 11' Wire Braid Hoses; Weather Cover for Power Pack; 3 Phase 208/230/460 Volt; Push Button Controls Mounted on 13' Sealtite; Ratchets with Grab Claws; and Driver Switch.

Exception: 30 hp and 50 hp come standard with oil cooler and continuous cycle; 50 hp 100 gpm come standard with fullness package; 50 hp 125 gpm come standard with fullness package and oil management package.

Subtotal:	\$290,165.00
Special Options (from Page 2):	\$0.00
Surcharge:	\$8,704.95
Estimated Freight:	\$1,844.00
Estimated Installation:	\$0.00
Estimated Sales Tax:	\$0.00
Total:	\$300,713.95

SPECIFICS

- * The above pricing is F.O.B. factory discounted price unless otherwise stated.
- * Standard MARATHON Domestic or International warranty applies, depending on equipment location
- * Unless you have a specific written Agreement with Marathon with different terms, payment terms are 100% payment of Total shown above Net 30 days from date of invoice. All orders are invoiced at time of shipment.
- * Terms for Recycling Solutions, Blok Pak and M-Series orders - The following PAYMENTS are required for orders over \$50,000: 30% due at time of order, 60% due 14 days prior to shipment, and final 10% due net 30 days after shipment.
- * Pricing does not include freight, fees, taxes, licenses, permits, building modifications, project management, installation or start up training charges unless specifically stated.
- * Quoted taxes are estimated. Tax exemption certificate must be supplied when placing order. Certificate provided after equipment invoices will not guarantee credit of sales tax.
- * Installation dates are estimated and installation may change based upon site readiness. Marathon reserves the right to charge a remobilization fee if the site is not ready for installation at time of equipment delivery.
- * National pricing for installation of machines purchased by Key Accounts does not apply to projects located in Nevada and, if noted herein, is provided for reference only. Licensed Contractors must supply site-specific installation quotations and perform the related work product in Nevada.
- * For customer-performed or third party installations arranged by customer, customer is responsible for completing this installation in accordance with OSHA and ANSI Standards.
- * Any changes to product configuration or delivery address/date after order is placed may incur additional charges.
- * If you have any questions, please feel free to contact your salesman.

**MARATHON EQUIPMENT COMPANY**

PO Box 1798

Vernon, AL 35592

Phone: (205) 695-9105 Fax: (205) 695-9150

Toll Free: (800) 633-8974

QUOTATION NO:**SG 22219 241****TERMS AND CONDITIONS OF SALE**

1. **ORDERS.** All orders are subject to acceptance or rejection by Environmental Solutions Group, its subsidiaries, or affiliates including but not limited to: Hell Environmental, Marathon Equipment Company, The Curotto-Can, LLC, and Bayne Machine Works (collectively, "ESG"). NO ORDERS MAY BE CHANGED IN ANY MANNER WITHIN THIRTY DAYS OF THE SCHEDULED PRODUCTION DATE. ANY CHANGES REQUIRED BY THE CUSTOMER WITHIN THIS 30-DAY TIME FRAME may incur additional charges AND WILL CAUSE THE ORDER TO BE REMOVED FROM THE PRODUCTION SCHEDULE AND RESCHEDULED AS DEEMED NECESSARY BY ESG IN ITS SOLE JUDGMENT.
2. **ORDER CANCELLATION.** After acceptance, orders for solid waste management and/or recycling Products ("Products") cannot be cancelled except upon terms that will compensate ESG fully for all Inconvenience, cost, loss or damage sustained.
3. **ORDER ACKNOWLEDGEMENTS.** An Order Acknowledgment ("OA") must be reviewed, signed and returned to the applicable ESG subsidiary or affiliate to indicate Purchaser's verification the order is accurate. ESG reserves the right to hold an order from being slotted in the Production Schedule until a signed OA has been received. Regardless of whether an Order Acknowledgment has been executed, Purchaser expressly waives any claims of error or loss for orders that are produced in accordance with an OA transmitted to Purchaser that Purchaser does not correct and transmit in writing to ESG before production begins.
4. **CUSTOM ORDER REQUESTS.** Orders for Products with components not regularly carried in stock or requiring special engineering, special parts ordering or special manufacture are in every case subject to approval by the Product Management department of ESG and shall be subject to the procedures and qualifications set forth in ESG's Custom Order Policy as published by ESG and/or posted on the respective ESG website. Work performed at Purchaser's request such as sketches, drawings, design, testing, fabrication and materials shall be charged at then-current rates.
5. **PERFORMANCE.** ESG shall not be liable for damages of any kind whatsoever arising from failure to complete the contract in accordance with its terms if such changes are due to Acts of God, wars, severe weather, strikes, fires, floods, accidents, material shortages, delays in transportation and other acts of force majeure or other causes beyond its reasonable control.
6. **INTELLECTUAL PROPERTY.** Sketches, engineering drawings, specifications, models, mock-ups, manuals, marketing materials, and all preparatory work submitted to, created or furnished by ESG shall remain its exclusive property. No other customer use of these materials is authorized, nor may derivations, alternatives or modifications created therefrom be used or disclosed to anyone except with the prior written consent of ESG.
7. **SHIPMENT AND F.O.B. POINT.** All shipments will be made after completion of manufacture unless otherwise agreed to in writing. In the event that agreement is reached for ESG to store completed items, the Purchaser will be invoiced immediately upon completion of manufacture, and such invoice shall be due and payable according to these terms. Storage shall be at the risk of the Purchaser and ESG shall be liable only for the ordinary care of the property. Unless otherwise stated in writing, all prices quoted or otherwise listed are F.O.B. point of manufacture. In all cases, in-transit liability and risk of loss transfers to the Purchaser at the time of delivery to the Purchaser, their employees, agents, or a delivery service or common carrier - whichever occurs first. Unless otherwise provided, with respect to the attachment or affixing of ESG Products to the Purchaser's property (e.g. truck chassis), title and risk of loss with respect to such Products are transferred to Purchaser upon initiation of such attachment.
8. **PURCHASER'S PROPERTY.** ESG may charge the Purchaser at current rates, for handling and storing Purchaser's property (e.g. truck chassis or Purchaser-supplied accessories) when held for more than thirty days. All Purchaser's property, or third parties' property, that is stored by ESG or its employees, agents or assigns (whether on or off ESG facilities) is at the Purchaser's or other party's risk. ESG shall only provide for ordinary care of the property and shall not be liable for any loss or damage thereto caused by fire, water, corrosion, vandalism, theft, negligence, or any cause whatsoever. It is the Purchaser's unconditional obligation to insure its property and/or accept the risk of loss.
9. **TRAINING.** It is the Purchaser's responsibility to provide these Terms & Conditions of Sale to the Product owner and to specifically notify the Product owner that it is the Product owner's responsibility to ensure that the Operators Manual remains with each unit and the Parts & Service Manual is available for use. Additionally, regardless of whether or not the manufacturer or its designee provides training at the time of Product delivery, the Product owner is responsible for training their operators and maintenance personnel and shall ensure that every person who operates or maintains the Product has been trained on the proper operation, service, storage, service hoist use, battery disconnect use, lock out/tag out procedures and the Product owner's company work rules for each Product.
10. **PRICES.** All orders are subject to current prices in effect at the time of shipment, including any applicable surcharges. Purchaser must exclusively assign the qualified alternative motor vehicle credit to ESG or its designee. Purchaser expressly understands and agrees that the pricing quoted for qualified alternative motor vehicles includes a discount predicated on ESG obtaining a stipulated tax credit and Purchaser agrees to fully compensate ESG for any reduction or recapture of said qualified alternative motor vehicle tax credit for any reason whatsoever. It is understood that recapture of the tax credit may be caused by converting a Compressed Natural Gas ("CNG") engine to a diesel engine.
11. **PAYMENT AND COLLECTION.** ESG's standard domestic payment terms are Net 30 days from the date of invoice unless modified by a separate written agreement with your company. For non-domestic shipments, a Letter of Credit or other ESG approved surety of payment may be required prior to shipment. Notwithstanding the foregoing, ESG reserves the right to offset payments against open account balances and administer credit in accordance with its Credit Department's sole judgment at any time and its decision shall be final, non-appealable, and binding. If for any reason the Purchaser defaults on any monies owed to ESG, said Purchaser shall be responsible for all costs incurred by ESG in the collection of outstanding monies including but not limited to: collection agency fees, filing fees, judgment, interest expense, settlement, Court and/or administration costs, attorney's fees, etc. ESG reserves the right to charge and collect late fees for overdue payments.
12. **TAXES.** Unless specifically stated on your quotation and invoice, prices charged by ESG do not include Federal, State, City or other excise, occupation, sales, use, VAT or similar taxes which are extra and are the customers' obligation to pay to the applicable taxing authority at rates in effect at time of shipment. If Federal Excise Taxes are included and listed on the order acknowledgment or invoice, they are stated at the rates and regulations in effect at the time this order is written, and are subject to revision in accordance with rates and regulations in effect at time of shipment. If Federal Excise Taxes are not included on ESG's invoice, this shall not be construed as ESG
13. **PRODUCT IMPROVEMENT.** ESG reserves the right to change its solid waste management & recycling Product offerings (collectively, "Products"), Product specifications, material or component suppliers, Product design, and/or Production procedures at any time in its sole judgment.
14. **WARRANTY.** ESG warrants its Products in accordance with the applicable ESG subsidiary or affiliate's Warranty Statement (the "Warranty Statement") provided with the Product or published on the respective website unless you have a contract with ESG providing specific terms and conditions of warranty. A copy of the Warranty Statement is available from your Dealer and is posted on ESG's applicable website for the Product. While the text in the Warranty Statement for each respective ESG entity is more specific and shall prevail, ESG's Product warranty is expressly limited to repair or replacement of any component or part thereof, for any such Product that is determined by ESG to be defective in materials or workmanship. The component or part shall be repaired or replaced without cost to the first purchaser for materials and labor provided such unit is returned for such repair or replacement to an authorized ESG Dealer within six months from the unit's in-service date to such first purchaser. Any Product warranty is not transferable, except for sales demonstration units. No warranty claims will be processed on any ESG Product unless the warranty registration was submitted timely to the ESG Customer Support Department applicable to the Product. Any service parts sold by ESG carry a six month warranty for part replacement only, due to a defect in material or workmanship. Troubleshooting time, component removal and installation labor cost is excluded from ESG's service part warranty.
15. **WE MAKE NO OTHER WARRANTY, EXPRESS OR IMPLIED, AND MAKE NO WARRANTY OF MERCHANTABILITY OR FITNESS FOR ANY PARTICULAR PURPOSE.** Any improper use, operation beyond rated capacity, substitution of non-OEM parts not specifically approved by us in writing, or any alteration or repair by others in such manner as in our judgment affects the Product materially and adversely shall void this Warranty. NO EMPLOYEE OR REPRESENTATIVE OF ESG IS AUTHORIZED TO CHANGE THIS WARRANTY IN ANY WAY OR GRANT ANY OTHER WARRANTY, except as part of a definitive written agreement between the manufacturer and purchaser. The above warranty supersedes and is in lieu of all other warranties whether express or implied.
16. **NO DIRECT OR CONSEQUENTIAL DAMAGES.** ESG hereby disclaims and does not assume any liability whatsoever for costs or expenses related to the use or unavailability of its Product for any reason, including but not limited to accidents, injury, death, late delivery penalties, chassis flooring cost or charges, Product down time, fire damage, loss of Product, in-transit damage or loss, opportunity cost, lost profits, or any other direct, indirect or consequential losses, damages or delay, property damage or injuries or death to persons.
17. **OFF-SITE LOSS DISCLAIMER.** The Purchaser shall bear all risk for damage or loss to the purchaser-owned Product, chassis, accessories, or injury to property or persons, while the Product and/or chassis is either at ESG facilities, enroute to ESG facilities, at or enroute to/from a third party subcontractor of ESG's, in transit to or from Purchaser's or the chassis manufacturer's location, or to/from any third party Dealer or a component supplier's location.
18. **CHOICE OF LAW AND VENUE.** This agreement shall be interpreted according to the laws of the State of Tennessee. Any claims lodged against ESG involving this order in any way must be filed and adjudicated in the Circuit or Federal Court located in Hamilton County, Tennessee, and in the case of appeal, at the situs of their respective appellate Courts.
19. **NON-WAIVER.** Our failure at any time to exercise any right we may have under this agreement shall not constitute a waiver thereof nor prejudice our right to enforce same thereafter.
20. **SECURITY INTEREST.** The Purchaser hereby grants a first priority purchase money security interest and lien to ESG in and to all Products and goods sold to Purchaser and to which these Terms & Conditions of Sale relate, to all chassis and trucks to which any such Products or goods become accessions, and to all Products, proceeds and accessions thereto, from time to time (collectively, the "Product Collateral") to secure all obligations of the Purchaser or any person or entity related to Purchaser, under any agreement, arrangement or financing with or provided by the Company, including without limitation, the obligation to pay the unpaid purchase price of all Products and goods from time to time sold by ESG to Purchaser (collectively, the "Obligations"). The Purchaser represents and warrants that none of the Product Collateral is subject to any other lien, security interest or claim of any type or nature, and covenants that it: (i) will not create or permit to exist any lien, security interest or claim in any portion of the Product Collateral in favor of any other person, (ii) will pay, prior to any delinquency, all taxes (including all property taxes), charges or other obligations which may be owing with respect to the Product Collateral from time to time, (iii) will not change its name, place of incorporation or creation, address or location of the Product Collateral without first providing ESG with not less than 30 days prior written notice, (iv) will take all steps requested by ESG to obtain and maintain the perfection of the security interests granted hereunder, (v) will keep the Product Collateral fully insured against destruction or damage in an amount up to its full insurable value, and will name ESG as additional insured and loss payee under all such insurance policies, and (vi) will cooperate with ESG upon any default of any of the Obligations and will, at the request of ESG, turn over and deliver all Product Collateral to or at the direction of ESG. Purchaser will, at ESG's request, execute such additional security agreements and amendments and additions thereto or hereto as ESG requests in order that it may have at all times a first priority purchase money security interest and lien securing the Obligations. Purchaser hereby authorizes ESG to file financing statements and amendments thereto in all relevant jurisdictions naming Purchaser as debtor and describing the Product Collateral as collateral.
21. **ENTIRE AGREEMENT.** Unless a prevailing purchase contract is in place between the parties hereto, this order, including the above Terms & Conditions of Sale, contains the complete and final agreement between the parties hereto and no Purchaser-supplied purchase order terms, verbal agreement, or other document in any way modifying or supplementing any of these terms and conditions will be binding on ESG unless agreed to in writing by an authorized representative of ESG.

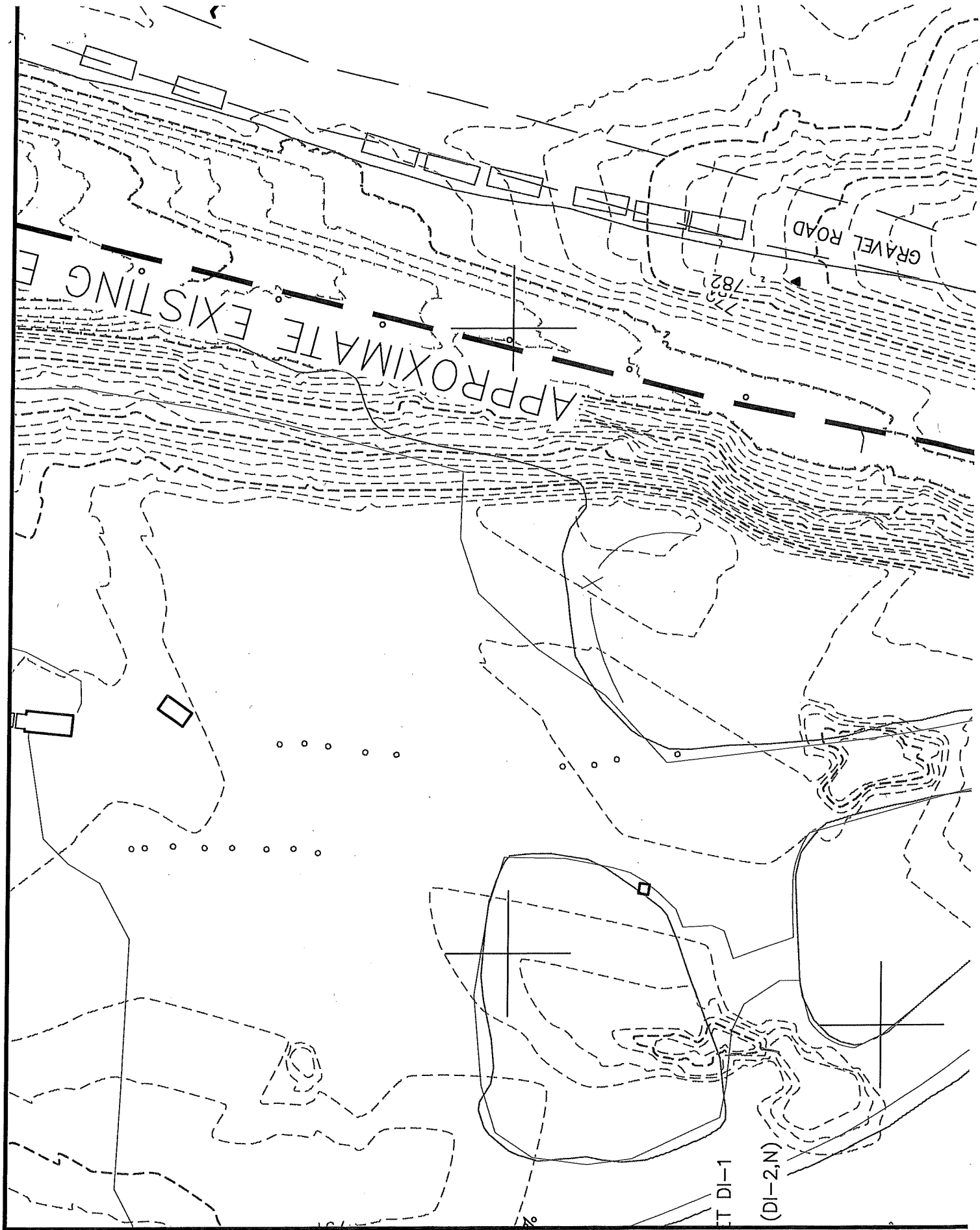
ACCEPTANCE

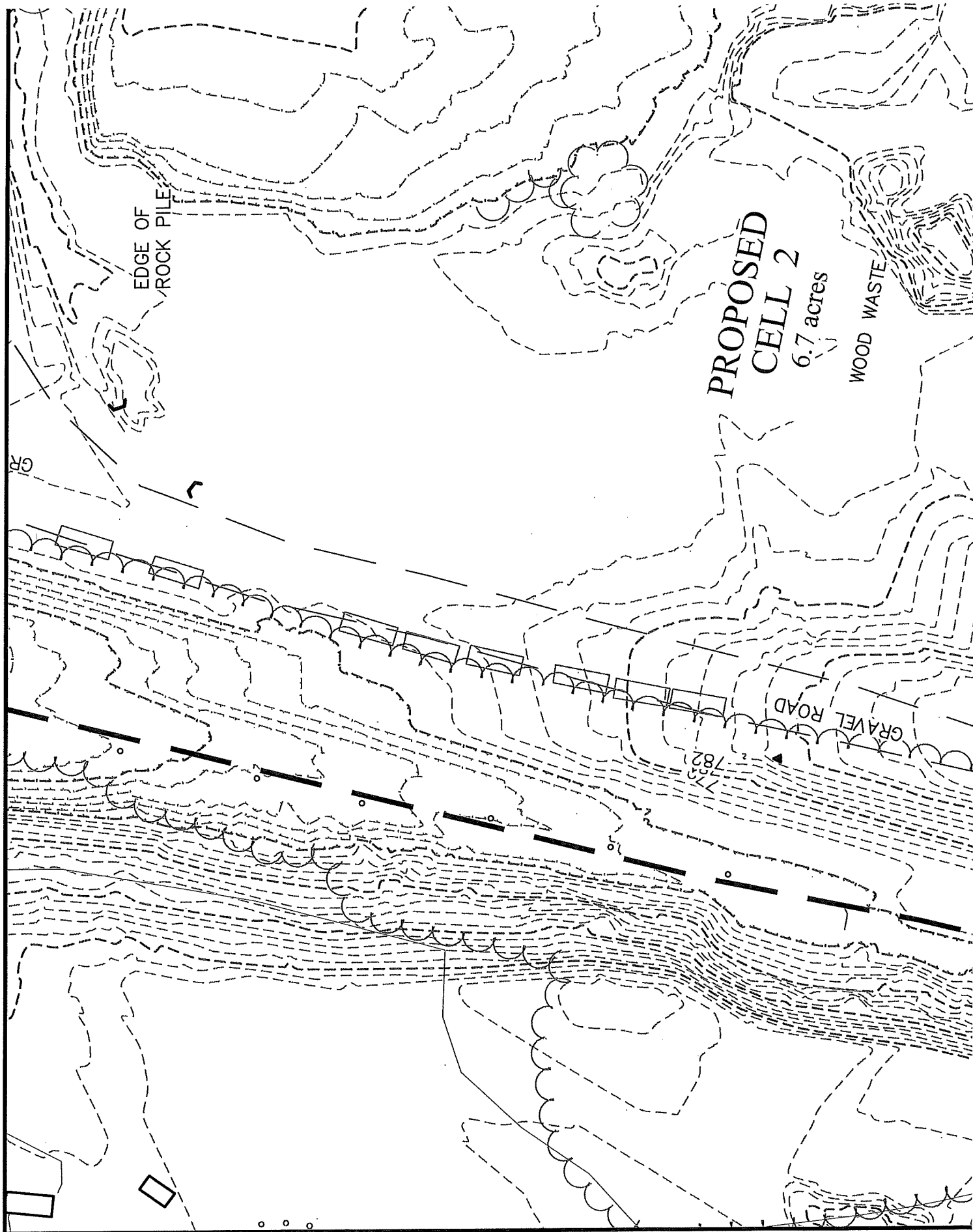
Quotation Accepted By (Signature): _____

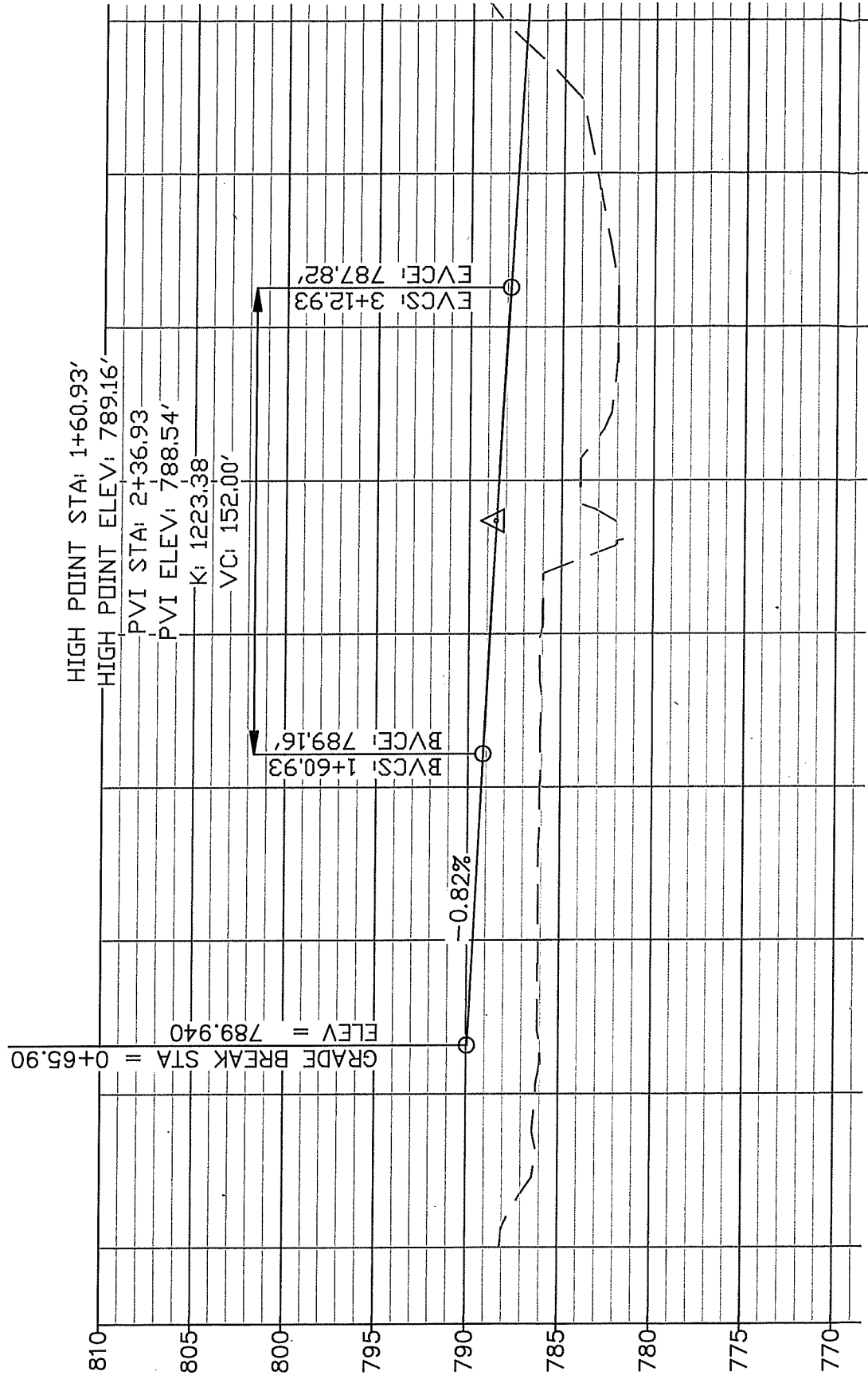
Printed Name and Title of Authorized Signatory: _____

Date: _____

Attachment 4
Conceptual Layouts







Cut/Fill Summary

Name	Cut Factor	Fill Factor	2d Area	Cut
PROPOSED GRADE	1.000	1.000	266213.16 Sq. Ft.	3593.54 C
Totals			266213.16 Sq. Ft.	3593.54 C

LOW POINT STA: 3+75.00

LOW POINT ELEV: 765.00'

PVI STA: 3+00.00

PVI ELEV: 765.00'

K: 37.34

VC: 150.00'

BVCS: 2+25.00
BVCE: 768.01'

EVCS: 3+75.00
EVCE: 765.00'

-2.20%

-4.02%

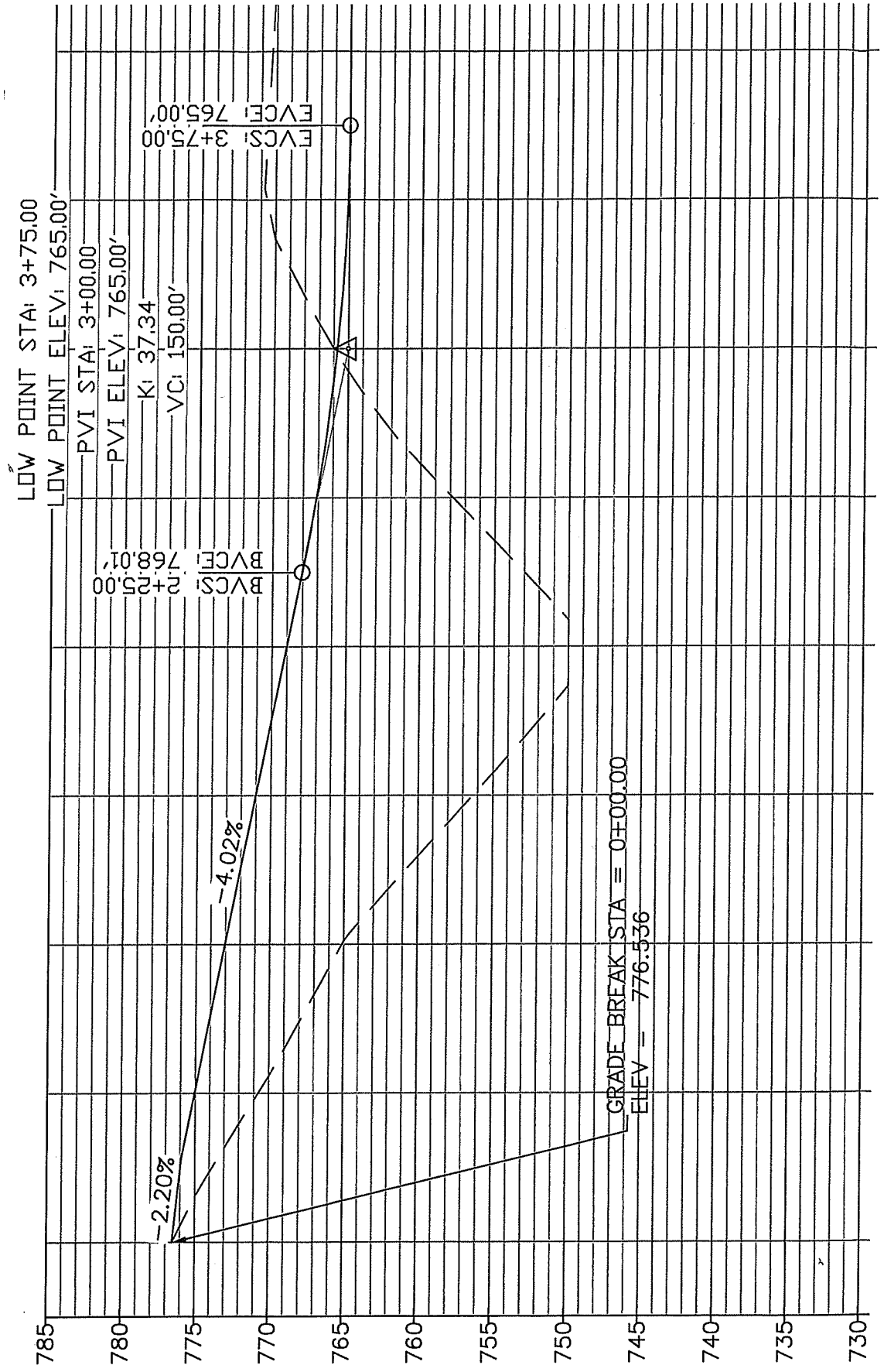
GRADE BREAK STA = 0+00.00
ELEV = 776.536

785
780
775
770
765
760
755
750
745
740
735
730
725
720
715

Cut/Fill Summary

Name	Cut Factor	Fill Factor	2d Area
VOL- PROPOSED SURFACE	1.000	1.000	279447.28 Sq. Ft.
Totals			279447.28 Sq. Ft.

PIP





Memorandum

To: Mr. Dean Rodgers, Amherst County Administrator
From: Ms. Lynn P. Klappich, Program Manager
Date: March 5, 2019
Project Name: Amherst Options Evaluation
Project Number: B106176-109/109B
Subject: Option 3 – Direct Haul from Convenience Centers
cc: Board of Supervisors, David Proffitt, Keith Stevens, Don Marickovich

In May 2018, Amherst County considered the long term costs associated with the development of either Cell 2 of the existing landfill (identified as Option 1) or the construction of a transfer station at the landfill site with hauling considered to two facilities (Region 2000 and WMX – Amelia County) which was identified as Option 2. Option 2 also included closure of Cell 1.

The May 2018 evaluation considered a time period of FY 2019 through FY 2038 which was based on the estimated life of Cell 2 of the landfill. The evaluation was performed as a total cost of service analysis and included capital construction costs, equipment costs, operational costs, closure and post closure care costs, and the debt service on the loan.

The report did not include costs for the convenience centers or recycling which was considered to be the same for both options. The report provided total cost of service, annual costs and an estimated cost per ton.

Since then, Draper Aden Associates was requested to consider an alternate location for a transfer station and our report has been presented under separate memorandum. The landfill site remains the most cost effective site for the transfer station at this time.

As discussed, and as important to this memorandum, landfill tipping fees are not charged against the tonnage collected from the County's convenience centers, collected curbside in Madison Heights from residents, brought by the Town of Amherst contract collection company, and brought by Sweet Briar College's contract collection company. Deliveries to the landfill for 2017 as provided in the May report to the Board of Supervisors is included below for reference:



Mr. Dean Rodgers, Amherst County Administrator

March 5, 2019

Page 2 of 4

Summary of Landfill Deliveries by Source – 2017 County Records

CATEGORY	TONNAGE	%
County staffed convenience centers	4,665	15.8
County unstaffed convenience centers	3,224	10.9
County curbside – Madison Heights	3,255	11.0
County - Direct deliveries to landfill (Exclusive of yard waste)	2,136	7.2
Town of Amherst	931	3.2
VDOT	201	0.7
Private haulers	15,070	51.2
TOTAL	29,482	100.0

Recently, Draper Aden Associates was asked to consider a third option. This option would consider the costs to the County if the County closed Cell 1 of the landfill and directed the waste collected from the convenience centers to an alternate solid waste facility outside of the County. This is termed Option 3 in this memorandum. Two locations for receipt of the convenience center waste were considered for this evaluation and included the operating Region 2000 Livestock Road landfill in Rustburg, VA and the proposed County Waste of Virginia (CWV) Transfer Station in Concord, Virginia. The CWV facility is not yet permitted, constructed or operational but CWV has indicated that this facility would be operational within the time frames needed by the County (e.g. within 2 years).

For Option 3, costs for the additional transportation to these two facilities (over the existing cost of transport to the landfill) were considered as well as the tipping fee costs. The Region 2000 tipping fee is the FY 2019 market rate (\$40.25/ton) while the Concord Transfer Station rate was quoted during a meeting with CWV (\$55.00/ton). As hauling from the convenience centers is privatized and subject to procurement, the hauling costs may vary from those estimated. Tipping fees are also subject to negotiation, inflationary factors or procurement and may vary from the assumptions in this evaluation.

In addition for this analysis, Draper Aden Associates was asked to consider the cost for disposal for the County's waste from the convenience centers (7,889 tons from Table 1 above) only, and to consider the cost for disposal for the waste collected from the convenience centers, curbside in Madison Heights, the Town of Amherst and Sweet Briar College (actual tonnage for the college was not available at preparation of this memorandum so 100 tons was included) (12,175 tons). Collection costs for Madison Heights, the Town of Amherst and Sweet Briar are not considered as these costs are currently not considered in the County's budget.

Attachment 1 includes the tables developed during this evaluation. Tables 1A and 1B illustrate the base calculations for FY 2019 for the differential in hauling costs from the convenience centers, and disposal costs at the varying tonnages identified above. Tables 2A and 2B project these costs over the period from FY 2019 through FY 2037, to allow comparison with Options 1 and 2 from the original report. Table 3 provides a comparison of Option 3 with Options 1 and 2 from the original report. The table below summarizes the findings.

Comparison of Options

OPTION	ANNUAL TONNAGE HANDLED BY SYSTEM	ESTIMATED DISPOSAL COST FY 2019 - FY 2037	TOTAL ANNUAL SOLID WASTE COSTS	COST PER TOTAL TON
<i>Existing landfill operation - FY 2019 budget INCLUDING debt service</i>	<i>24,600</i>	<i>LANDFILL FY 2019</i>	<i>\$2,045,934</i>	<i>\$83</i>
Option 1 - Continue landfill operations - Construction of Cell 2 - Original report	24,600	\$45,199,300	\$3,170,511	\$129
Option 2A - Construct transfer station at landfill and transfer to Region 2000 - Original report	24,600	\$44,111,100	\$3,113,237	\$127
Option 2B - Construct transfer station at landfill and transfer to WMX - Amelia landfill - Original report	24,600	\$40,563,700	\$2,926,532	\$119
Option 3A - Direct haul from convenience centers to Region 2000 - disposal cost for convenience center tonnage only (Table 2A)	7,889	\$18,325,000	\$1,756,074	\$223
Option 3B - Direct haul from convenience centers to Concord TS - disposal cost for convenience center tonnage only (Table 2A)	7,889	\$19,467,000	\$1,816,179	\$230
Option 3C - Direct haul from convenience centers to Region 2000 - disposal cost convenience center, curbside Madison Heights, Town of Amherst and Sweet Briar (Table 2B)	12,175	\$22,265,000	\$1,963,442	\$161
Option 3D - Direct haul from convenience centers to Concord TS - disposal costs for convenience center, curbside Madison Heights, Town of Amherst and Sweet Briar (Table 2B)	12,175	\$24,851,000	\$2,099,547	\$172

Based on this information and as would be anticipated, the direct haul from the convenience centers to an out of County facility is less expensive regardless of disposal costs than the future operation by the County of either a landfill or a transfer station. Reliance on out of County facilities reduces the short term flexibility of the County but would not preclude the County from revisiting either the landfill operations or a transfer station operation in the future.

Other considerations for the County relative to Option 3 include the following:

- Option 3 will require the County's business sector to determine the best alternative for their waste handling.
- Option 3 will require the County PSA or any other water or wastewater treatment facility that currently uses the landfill to find alternate disposal options for their sludge.
- Option 3 reduces the ability of the County to react to natural disasters.
- Option 3 will require the County to consider additional convenience centers to better handle their citizens waste disposal needs. In 2017, 2,136 tons was directly delivered to the landfill by County residents or other businesses not currently collected by the private haulers. Residents will need to be directed to the convenience centers or to curbside collection where possible. Businesses will need to change their waste handling operations.
- Option 3 provides services only to residential customers.

There is a significant amount of information before the Board of Supervisors for consideration at this time. Based on the evaluations and projections, continuation of the landfill operations does not seem to be a viable alternative, not only based on cost but also based on concern relative to the growth in risk and liability associated with construction and operation of the next cell (and future cells). Other disadvantages have been outlined in previous presentations and the May 2018 report.

The transfer station option maintains current level of service, is most efficient cost/ton, provides multiple lowest bidder contracting options, avoids unlimited liability, provides indoor/contained operations without weather challenges, fewer manpower challenges, and low threat regulatory environment. Direct haul handles only the County convenience center collection with or without payment of other residential disposal fees. The final decision by the Board of Supervisors must consider their long term goal for the County's waste management program.

Attachment 1
Tables

TABLE 1A**OPTION 3 - DIRECT HAUL FROM CONVENIENCE CENTERS TO HANDLING FACILITY****Amherst County - Existing convenience center system as of 2017/2018****DIFFERENTIAL HAUL COSTS AND DISPOSAL FOR ONLY COUNTY CONVENIENCE CENTERS**

(Disposal only for convenience center tonnage)

County Collection Site	Hauls (From County records)	To Region 2000 - Option 3A		To Concord TS - Option 3B	
		One-Way Region 2000 LF (miles)	RT Miles	One-Way Potential Concord TS (miles)	RT Miles
60 East CC	59	32	3,776	26	3,068
60 West Container Site (615)	73	33	4,818	30	4,380
Coolwell CC	761	24	36,528	18	27,396
Galt's Mill Container Site (Stapleton)	Closed - tonnage assumed to go to Coolwell				
Long Mountain Container Site	8	43	688	37	592
New Glasgow Container Site (610)	116	33	7,656	27	6,264
Pedlar CC	272	27	14,688	25	13,600
Warrick Barn CC	112	36	8,064	31	6,944
New Site (Dodd's Store/60W)	Not constructed - will ultimately replace Long Mountain site				
TOTAL mileage			76,218		62,244
Cost per mile (FY 19 budget/current mile estimate)			\$4.75		\$4.75
Estimated haul cost - FY 2019			\$362,036		\$295,659
Differential HAUL cost for change in receiving facility			\$187,036		\$120,659
Cost for disposal per ton		R2K FY 2019	\$40.25	CWV quote	\$55.00
Tonnage hauled - 2017 County records			7,889		7,889
Total disposal cost - FY 2019			\$317,532		\$433,895
DIFFERENTIAL HAUL COST AND DISPOSAL - FY 2019			\$504,568		\$554,554

NOTES:

1. FY 2019 budget for haul from convenience centers to landfill is \$175,000. This equates to approximately \$4.75/mile. Hauling is privatized and this cost may vary with contractor.
2. Differential cost calculated as total haul cost **minus** current budget for hauling.
3. Differential cost used to allow comparison of this alternative with original report.
Original report did not include collection costs since assumed to be same regardless of landfill or transfer.
4. Disposal tonnage **ONLY** tonnage from County convenience centers.
4. The costs do not include any of the operational costs associated with convenience centers e.g. attendants.

TABLE 1B**OPTION 3 - DIRECT HAUL FROM CONVENIENCE CENTERS TO HANDLING FACILITY****Amherst County - Existing convenience center system as of 2017/2018****DIFFERENTIAL HAUL COSTS AND DISPOSAL FOR ALL COUNTY RESIDENTIAL GARBAGE**

(i.e. convenience centers, curbside in Madison Heights, Town of Amherst and Sweet Briar)

County Collection Site	Hauls (From County records)	To Region 2000 - Option 3C		To Concord TS - Option 3D	
		One-Way Region 2000 LF (miles)	RT Miles	One-Way Potential Concord TS (miles)	RT Miles
60 East CC	59	32	3,776	26	3,068
60 West Container Site (615)	73	33	4,818	30	4,380
Coolwell CC	761	24	36,528	18	27,396
Galt's Mill Container Site (Stapleton)	Closed - tonnage assumed to go to Coolwell				
Long Mountain Container Site	8	43	688	37	592
New Glasgow Container Site (610)	116	33	7,656	27	6,264
Pedlar CC	272	27	14,688	25	13,600
Warrick Barn CC	112	36	8,064	31	6,944
New Site (Dodd's Store/60W)	Not constructed - will ultimately replace Long Mountain site				
TOTAL mileage			76,218		62,244
Cost per mile (FY 19 budget/current mile estimate)			\$4.75		\$4.75
Estimated haul cost - FY 2019			\$362,036		\$295,659
Differential HAUL cost for change in receiving facility			\$187,036		\$120,659
Cost for disposal per ton		R2K FY 2019	\$40.25	CWV quote	\$55.00
Tonnage hauled - 2017 County records			12,175		12,175
Total disposal cost - FY 2019			\$490,044		\$669,625
DIFFERENTIAL HAUL COST AND DISPOSAL - FY 2019			\$677,079		\$790,284

NOTES:

1. FY 2019 budget for haul from convenience centers to landfill is \$175,000. This equates to approximately \$4.75/mile. Hauling is privatized and this cost may vary with contractor.
2. Differential cost calculated as total haul cost **minus** current budget for hauling.
3. Differential cost used to allow comparison of this alternative with original report.
Original report did not include collection costs since assumed to be same regardless of landfill or transfer.
4. Total County tonnage calculated as follows: convenience centers (7,889) + Town of Amherst (931) + County Curbside (Madison Heights)(3,255) + Sweet Briar (100) = 12,175 tons. See Table 4 in original report.
5. The costs do not include any of the operational costs associated with convenience centers e.g. attendants.

TABLE 3 (Revision 1)

**OPTION 3 - DIRECT HAUL FROM CONVENIENCE CENTERS TO HANDLING FACILITY
COMPARISON WITH OTHER OPTIONS - AVERAGE ESTIMATED ANNUAL COST**

Option 1 and Option 2 information taken from DAA 5/15/19 report (Page 2).

Options 3A through 3D taken from Tables 1A/2A and 1B/2B

Number of years in evaluation

19

OPTION	ANNUAL TONNAGE HANDLED BY SYSTEM	TOTAL ESTIMATED COST FY 2019 - FY 2037	AVERAGE ESTIMATED ANNUAL COST	COST PER TOTAL TON	GREEN BOX COLLECTION AND RECYCLING AVERAGE ANNUAL COST FY 2019 - FY 2037	TOTAL SOLID WASTE COSTS	COST PER TOTAL TON
Existing landfill operation - FY 2019 budget INCLUDING debt service							
Option 1 - Continue landfill operations - Construction of Cell 2 - Original report	24,600	LANDFILL FY 2019	\$1,387,445	\$56	\$658,489	\$2,045,934	\$83
Option 2A - Construct transfer station at landfill and transfer to Region 2000 - Original report	24,600	\$45,199,300	\$2,378,911	\$97	\$791,600	\$3,170,511	\$129
Option 2B - Construct transfer station at landfill and transfer to WMX - Amelia landfill - Original report	24,600	\$44,111,100	\$2,321,637	\$94	\$791,600	\$3,113,237	\$127
Option 3A - Direct haul from convenience centers to Region 2000 - disposal cost for convenience center tonnage only (Table 2A)	24,600	\$40,563,700	\$2,134,932	\$87	\$791,600	\$2,926,532	\$119
Option 3B - Direct haul from convenience centers to Concord TS - disposal cost for convenience center tonnage only (Table 2A)	7,889	\$18,325,000	\$964,474	\$122	\$791,600	\$1,756,074	\$223
Option 3C - Direct haul from convenience centers to Region 2000 - disposal cost convenience center, curbside Madison Heights, Town of Amherst and Sweet Briar (Table 2B)	7,889	\$19,467,000	\$1,024,579	\$130	\$791,600	\$1,816,179	\$230
Option 3D - Direct haul from convenience centers to Concord TS - disposal costs for convenience center, curbside Madison Heights, Town of Amherst and Sweet Briar (Table 2B)	12,175	\$22,265,000	\$1,171,842	\$96	\$791,600	\$1,963,442	\$161
	12,175	\$24,851,000	\$1,307,947	\$107	\$791,600	\$2,099,547	\$172

NOTES:

- Greenbox container (42050) and Recycling (42030) added as separate column.
- Options 3A through 3D include only differential haul costs from convenience centers.
- Differential haul costs from convenience centers used because Options 1 and 2 did not include any hauling costs from convenience centers.
- All Options include loan payback although loan money used for different activities depending on option.
- All Options include post closure care of landfill although variable with option.

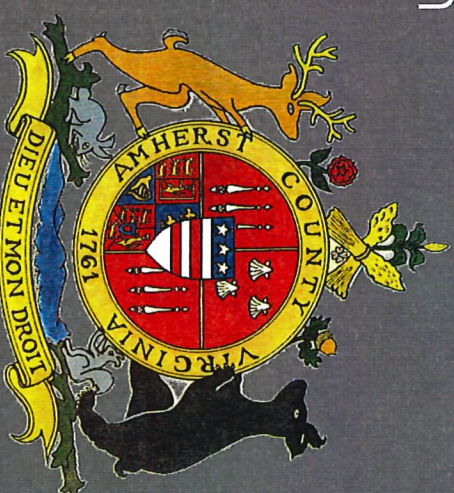


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Amherst County Solid Waste Program

Transfer Station Site Options and
Disposal Option Evaluation
(Continued)

March 5, 2019



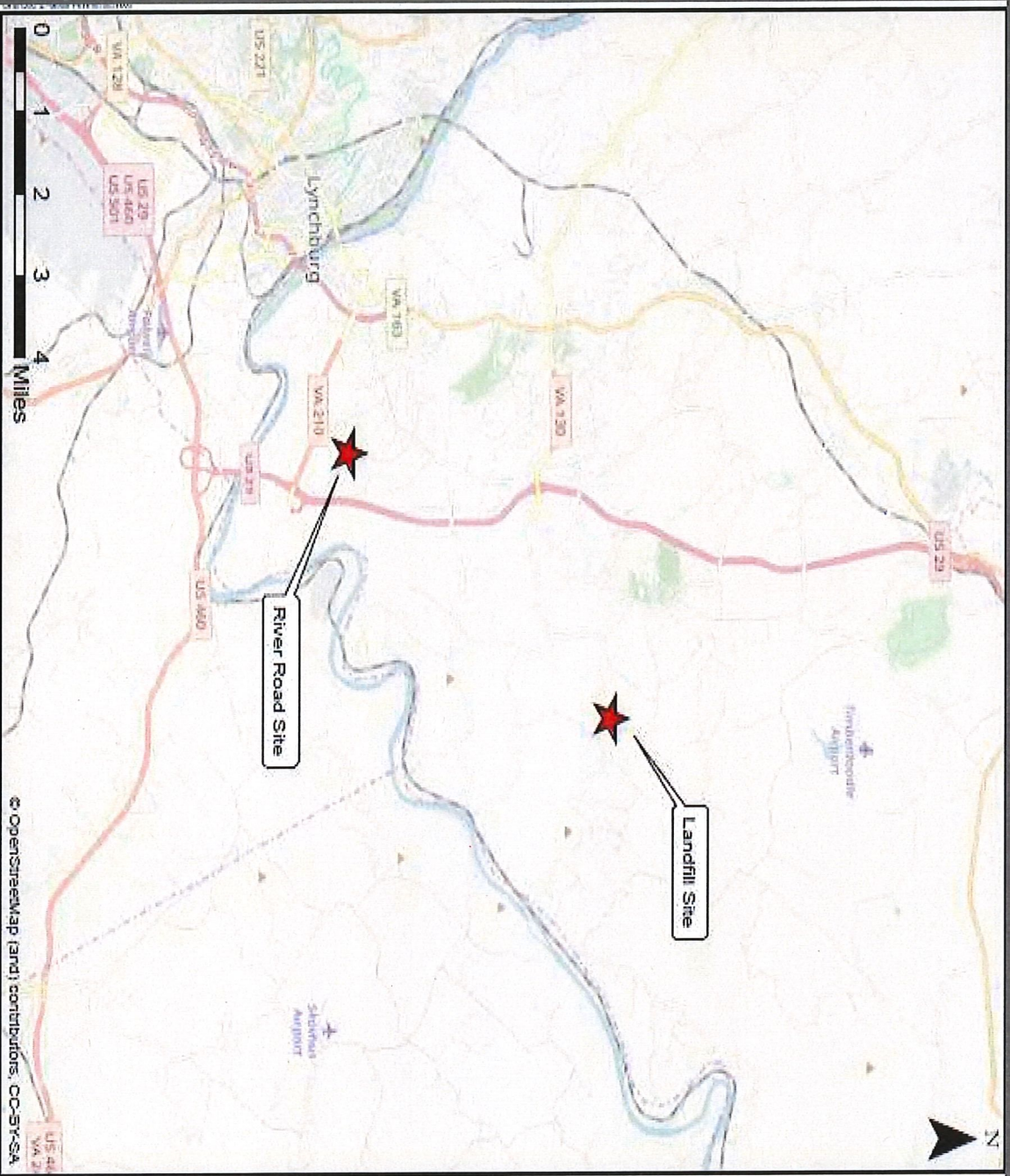
Agenda

- Introduction
- Transfer Station Site Options
- Continued Discussion of Disposal Options and Direct Haul



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Transfer Station Options



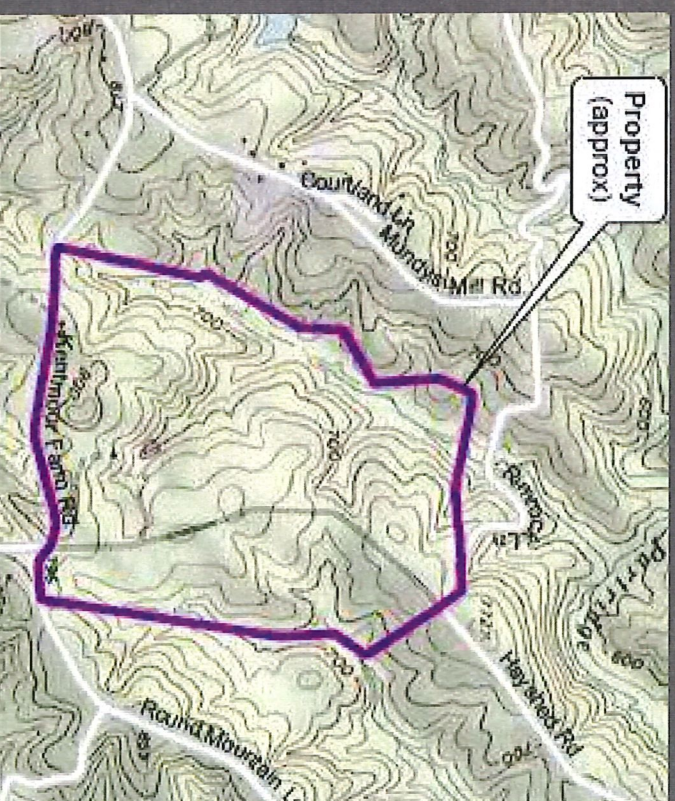
Landfill Site

ADVANTAGE

- Available land
- Existing infrastructure
- Able to support other operations

DISADVANTAGE

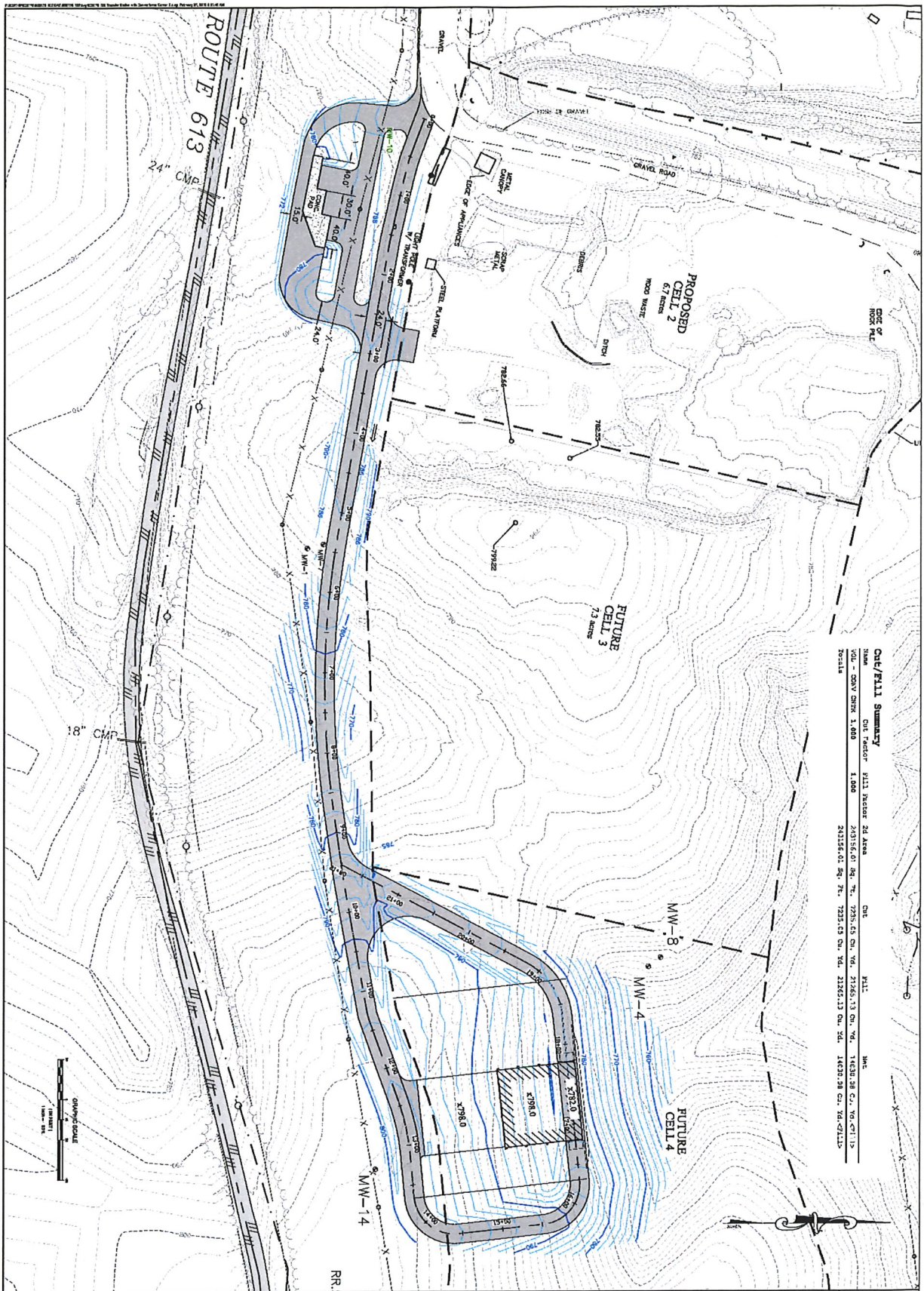
- Distance to primary road



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Out/Fill Summary

Item	Out	Fill	Net
100' - 200' SWM 1.000	1.000		
200' - 250' SWM 1.000	1.000		
250' - 300' SWM 1.000	1.000		
300' - 350' SWM 1.000	1.000		
350' - 400' SWM 1.000	1.000		
400' - 450' SWM 1.000	1.000		
450' - 500' SWM 1.000	1.000		
500' - 550' SWM 1.000	1.000		
550' - 600' SWM 1.000	1.000		
600' - 650' SWM 1.000	1.000		
650' - 700' SWM 1.000	1.000		
700' - 750' SWM 1.000	1.000		
750' - 800' SWM 1.000	1.000		
800' - 850' SWM 1.000	1.000		
850' - 900' SWM 1.000	1.000		
900' - 950' SWM 1.000	1.000		
950' - 1000' SWM 1.000	1.000		
1000' - 1050' SWM 1.000	1.000		
1050' - 1100' SWM 1.000	1.000		
1100' - 1150' SWM 1.000	1.000		
1150' - 1200' SWM 1.000	1.000		
1200' - 1250' SWM 1.000	1.000		
1250' - 1300' SWM 1.000	1.000		
1300' - 1350' SWM 1.000	1.000		
1350' - 1400' SWM 1.000	1.000		
1400' - 1450' SWM 1.000	1.000		
1450' - 1500' SWM 1.000	1.000		
1500' - 1550' SWM 1.000	1.000		
1550' - 1600' SWM 1.000	1.000		
1600' - 1650' SWM 1.000	1.000		
1650' - 1700' SWM 1.000	1.000		
1700' - 1750' SWM 1.000	1.000		
1750' - 1800' SWM 1.000	1.000		
1800' - 1850' SWM 1.000	1.000		
1850' - 1900' SWM 1.000	1.000		
1900' - 1950' SWM 1.000	1.000		
1950' - 2000' SWM 1.000	1.000		
2000' - 2050' SWM 1.000	1.000		
2050' - 2100' SWM 1.000	1.000		
2100' - 2150' SWM 1.000	1.000		
2150' - 2200' SWM 1.000	1.000		
2200' - 2250' SWM 1.000	1.000		
2250' - 2300' SWM 1.000	1.000		
2300' - 2350' SWM 1.000	1.000		
2350' - 2400' SWM 1.000	1.000		
2400' - 2450' SWM 1.000	1.000		
2450' - 2500' SWM 1.000	1.000		
2500' - 2550' SWM 1.000	1.000		
2550' - 2600' SWM 1.000	1.000		
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2650' - 2700' SWM 1.000	1.000		
2700' - 2750' SWM 1.000	1.000		
2750' - 2800' SWM 1.000	1.000		
2800' - 2850' SWM 1.000	1.000		
2850' - 2900' SWM 1.000	1.000		
2900' - 2950' SWM 1.000	1.000		
2950' - 3000' SWM 1.000	1.000		
3000' - 3050' SWM 1.000	1.000		
3050' - 3100' SWM 1.000	1.000		
3100' - 3150' SWM 1.000	1.000		
3150' - 3200' SWM 1.000	1.000		
3200' - 3250' SWM 1.000	1.000		
3250' - 3300' SWM 1.000	1.000		
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3550' - 3600' SWM 1.000	1.000		
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3950' - 4000' SWM 1.000	1.000		
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4050' - 4100' SWM 1.000	1.000		
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4350' - 4400' SWM 1.000	1.000		
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4550' - 4600' SWM 1.000	1.000		
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5150' - 5200' SWM 1.000	1.000		
5200' - 5250' SWM 1.000	1.000		
5250' - 5300' SWM 1.000	1.000		
5300' - 5350' SWM 1.000	1.000		
5350' - 5400' SWM 1.000	1.000		
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5450' - 5500' SWM 1.000	1.000		
5500' - 5550' SWM 1.000	1.000		
5550' - 5600' SWM 1.000	1.000		
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5950' - 6000' SWM 1.000	1.000		
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6050' - 6100' SWM 1.000	1.000		
6100' - 6150' SWM 1.000	1.000		
6150' - 6200' SWM 1.000	1.000		
6200' - 6250' SWM 1.000	1.000		
6250' - 6300' SWM 1.000	1.000		
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7000' - 7050' SWM 1.000	1.000		
7050' - 7100' SWM 1.000	1.000		
7100' - 7150' SWM 1.000	1.000		
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7200' - 7250' SWM 1.000	1.000		
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7300' - 7350' SWM 1.000	1.000		
7350' - 7400' SWM 1.000	1.000		
7400' - 7450' SWM 1.000	1.000		
7450' - 7500' SWM 1.000	1.000		
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7900' - 7950' SWM 1.000	1.000		
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8000' - 8050' SWM 1.000	1.000		
8050' - 8100' SWM 1.000	1.000		
8100' - 8150' SWM 1.000	1.000		
8150' - 8200' SWM 1.000	1.000		
8200' - 8250' SWM 1.000	1.000		
8250' - 8300' SWM 1.000	1.000		
8300' - 8350' SWM 1.000	1.000		
8350' - 8400' SWM 1.000	1.000		
8400' - 8450' SWM 1.000	1.000		
8450' - 8500' SWM 1.000	1.000		
8500' - 8550' SWM 1.000	1.000		
8550' - 8600' SWM 1.000	1.000		
8600' - 8650' SWM 1.000	1.000		
8650' - 8700' SWM 1.000	1.000		
8700' - 8750' SWM 1.000	1.000		
8750' - 8800' SWM 1.000	1.000		
8800' - 8850' SWM 1.000	1.000		
8850' - 8900' SWM 1.000	1.000		
8900' - 8950' SWM 1.000	1.000		
8950' - 9000' SWM 1.000	1.000		
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9050' - 9100' SWM 1.000	1.000		
9100' - 9150' SWM 1.000	1.000		
9150' - 9200' SWM 1.000	1.000		
9200' - 9250' SWM 1.000	1.000		
9250' - 9300' SWM 1.000	1.000		
9300' - 9350' SWM 1.000	1.000		
9350' - 9400' SWM 1.000	1.000		
9400' - 9450' SWM 1.000	1.000		
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9850' - 9900' SWM 1.000	1.000		
9900' - 9950' SWM 1.000	1.000		
9950' - 10000' SWM 1.000	1.000		



CONCEPT PLAN - POTENTIAL TRANSFER STATION OPTION 1 - LANDFILL SITE - MODIFIED TO EAST PLAN VIEW		Draper Aden Associates Engineering • Surveying • Environmental Services 2200 South Main Street Blacksburg, VA 24060 540-662-0444 Fax: 540-662-0251 www.daa.com	
AMHERST COUNTY, VIRGINIA		• Richmond, VA • Fairfax, VA • Charlottesville, VA • Northern Virginia • Hampton Roads, VA • Virginia Beach, VA	

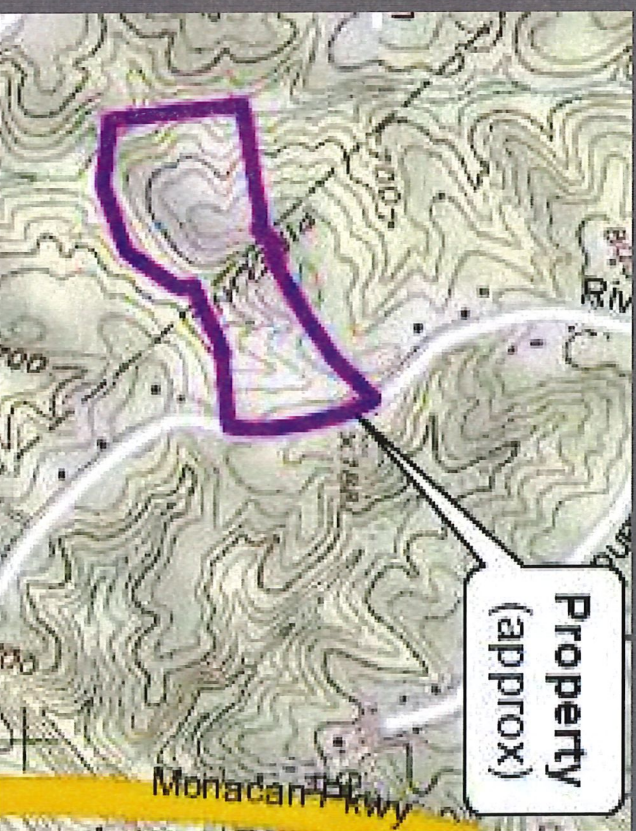
Riverview Road Site

ADVANTAGE

- Proximity to primary road

DISADVANTAGE

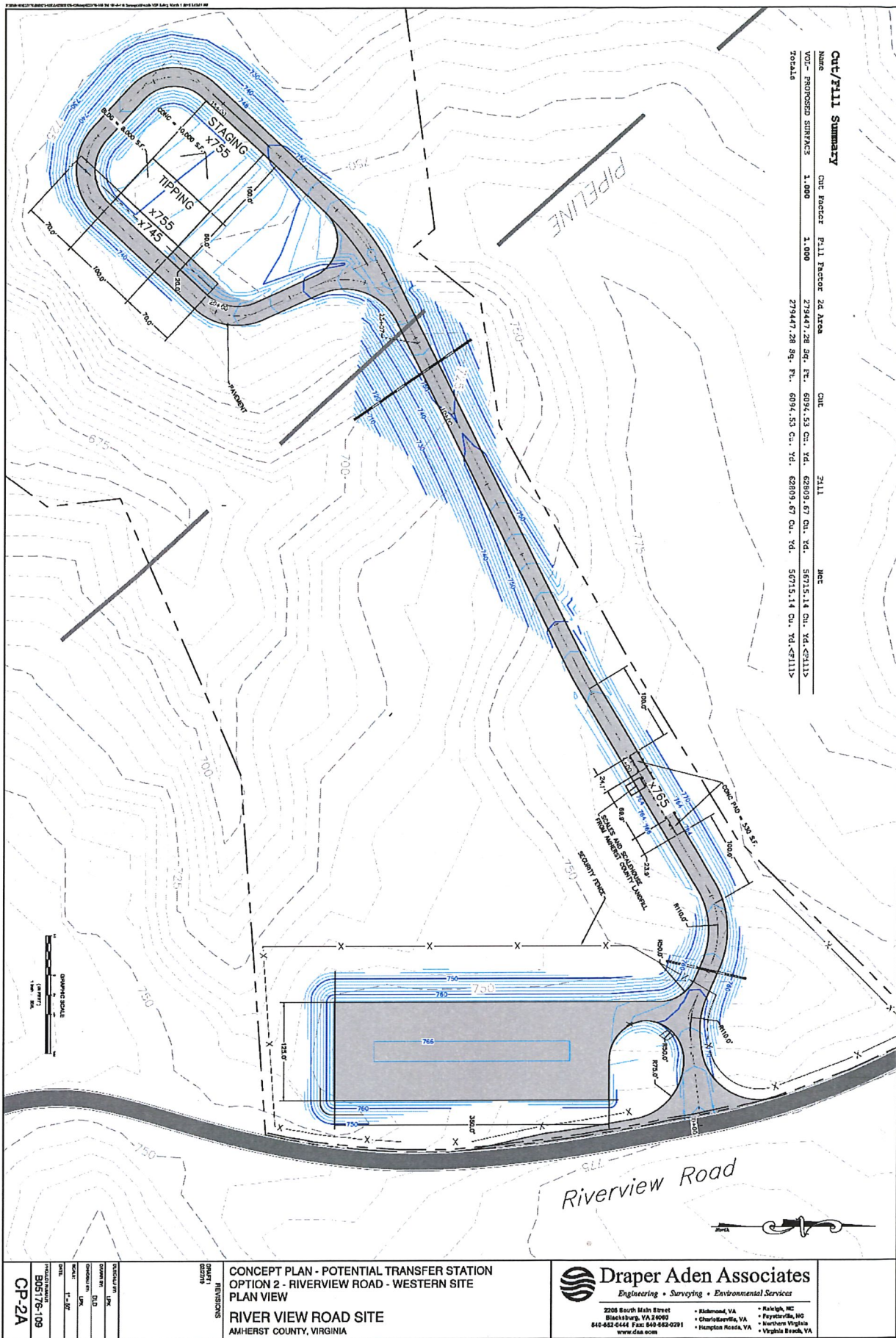
- Previous usage as landfill
- Need for infrastructure
- Risk of encountering waste and additional costs
- Pipeline and other utilities
- Limited space



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Cut/Fill Summary

Name	Cut Factor	Fill Factor	2d Area	Cut	Fill	Net
VOL - PROPOSED SURFACE	1.000	1.000	279447.28 Sq. Ft.	6094.53 Cu. Yd.	62809.67 Cu. Yd.	56715.14 Cu. Yd. <FILL>
Totals			279447.28 Sq. Ft.	6094.53 Cu. Yd.	62809.67 Cu. Yd.	56715.14 Cu. Yd. <FILL>



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Estimated Capital Costs

ITEM	OPTION 1 Existing Landfill (Cell 3/4 area)	OPTION 2 Riverview Road site West side
Building	\$820,000±	\$820,000±
Special foundation	Not required	\$300,000±
Landfill gas control system	Not required	\$30,000±
Compaction equipment	\$0	\$330,000±
Entrance improvements	\$100,000	\$120,000
Scales and scalehouse	Not required	\$250,000
Sitework	\$1,120,000	\$2,717,000
Subtotal	\$2,040,000	\$4,567,000
Engineering and permitting	\$200,000	\$300,000
TOTAL	\$2,240,000	\$4,867,000



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Conclusion

- Capital costs for Riverview Road site exceed funding.
- Liability associated with construction on an old landfill creates the potential for increased costs and environmental issues as well as permitting challenges.
- Recommend elimination of this site from further consideration.



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Option 3 – Direct Haul

What is Direct Haul?

CATEGORY	TONNAGE 2017	%
County staffed convenience centers	4,665	15.8
County unstaffed convenience centers	3,224	10.9
County curbside – Madison Heights	3,255	11.0
County - Direct deliveries to landfill (Exclusive of yard waste)	2,136	7.2
Town of Amherst	931	3.2
VDOT	201	0.7
Private haulers	15,070	51.2
TOTAL	29,482	100.0



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Elements of Direct Haul

- Considered hauling to either Region 2000 or proposed County Waste transfer station in Concord.
- Tipping fee at Region 2000 is market rate = \$40.25/ton
- Tipping fee at Concord Transfer Station quoted at \$55/ton.
- Additional haul distance from convenience centers to facilities.
- Costs considered increased haul costs, payback of bond, post closure and tipping fee.



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Cost Comparison

OPTION	ANNUAL TONNAGE HANDLED BY SYSTEM	ESTIMATED DISPOSAL COST FY 2019 - FY 2037	TOTAL ANNUAL SOLID WASTE COSTS	COST PER TOTAL TON
<i>Existing landfill operation - FY 2019 budget INCLUDING debt service</i>				
Option 1 - Continue landfill operations - Construction of Cell 2 - Original report	24,600	LANDFILL FY 2019	\$2,045,934	\$83
Option 2A - Construct transfer station at landfill and transfer to Region 2000 - Original report	24,600	\$45,199,300	\$3,170,511	\$129
Option 2B - Construct transfer station at landfill and transfer to WMX - Amelia landfill - Original report	24,600	\$44,111,100	\$3,113,237	\$127
Option 3A - Direct haul from convenience centers to Region 2000 - disposal cost for convenience center tonnage only (Table 2A)	24,600	\$40,563,700	\$2,926,532	\$119
Option 3B - Direct haul from convenience centers to Concord TS - disposal cost for convenience center tonnage only (Table 2A)	7,889	\$18,325,000	\$1,756,074	\$223
Option 3C - Direct haul from convenience centers to Region 2000 - disposal cost convenience center, curbside Madison Heights, Town of Amherst and Sweet Briar (Table 2B)	7,889	\$19,467,000	\$1,816,179	\$230
Option 3D - Direct haul from convenience centers to Concord TS - disposal costs for convenience center, curbside Madison Heights, Town of Amherst and Sweet Briar (Table 2B)	12,175	\$22,265,000	\$1,963,442	\$161
Option 3E - Direct haul from convenience centers to Concord TS - disposal costs for convenience center, curbside Madison Heights, Town of Amherst and Sweet Briar (Table 2B)	12,175	\$24,851,000	\$2,099,547	\$172

Conclusion – Direct Haul

- Option 3 considers a very different philosophy relative to the management of waste generated in the County.
- Direct haul reduces level of services to citizens.



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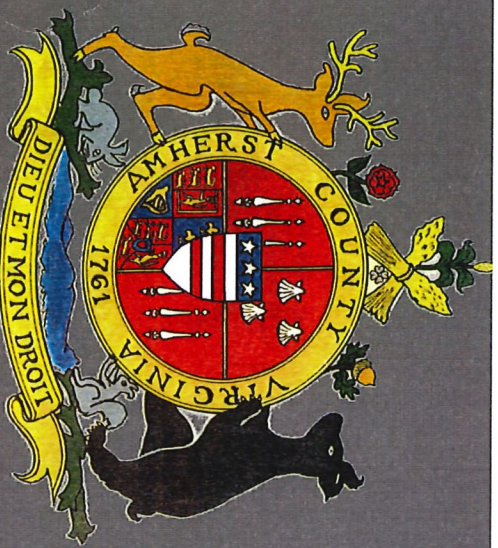
Conclusion - Transfer

Transfer station:

- Maintains current level of services;
- Is most efficient cost/ton;
- Provides multiple lowest bidder contracting options;
- Avoids unlimited liability;
- Provides indoor/contained operations without weather challenges;
- Fewer manpower challenges; and
- Low threat regulatory environment.



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