



SARASOTA COUNTY

"Dedicated to Quality Service"

April 11, 2013

Bill Krumbholz
Solid Waste Section
Department of Environmental Protection
South District Office
2295 Victoria Avenue, Suite 364
Ft. Myers, Florida 33902

Re: Central County Solid Waste Disposal Complex
Permit No. 130542-007-SO/01 (Modification #130542-019-SO/MM)
WACS No. 51614
Annual Topographic Survey and Remaining Site Life Report

Dear Mr. Krumbholz:

In accordance with Specific Condition C.13.c of the above reference permit for the Central County Solid Waste Disposal Complex (CCSWDC), the Sarasota County Solid Waste Department is pleased to submit the annual topographic survey and remaining site life report. As shown in the supporting calculations the Phase II Class I Landfill Area has approximately 12.4 years of remaining site life from December 1, 2012 assuming a moderate increase in waste tonnage per year until reaching capacity. The topographic survey dated December 1, 2012, performed by Kucera International, Inc. and provided in Attachment A, demonstrates that the Phase II landfill slopes do not exceed 3 to 1 (H:V) and the top elevations do not exceed the maximum permitted design elevation of 121 feet NGVD. The Phase II Landfill Area is being filled and includes stormwater control features in general accordance with the permitted fill sequence plans and grades.

The following calculations are provided in support of the site life determination:

Objective:

Calculate the remaining landfill air space and site life in the Phase II Landfill Area located at the Central County Solid Waste Disposal Complex. The Phase I Landfill Area did not receive any waste during the subject period. The Phase I Closure commenced in November 2011 and was completed in January 2013 and is currently pending construction certification approval from the FDEP.

RECEIVED

APR 12 2013

G.E.P. South District

Knowns:

- Topographic survey prepared by Kucera International, Inc. dated December 1, 2012 and provided to the Sarasota County Solid Waste Department by Advanced Disposal, Inc. The signed and sealed topographic survey sheets are provided in Attachment A for reference.
- Solid Waste tonnage from December 1, 2011 to November 30, 2012 as reported by scale records for the date range. Please refer to the table provided in Attachment B.

Assumptions:

- Total Phase II Air Space = 6,000,000 cu. yards.
- The final cover soil volume is based on 3 feet of soil which includes a 1.0 foot intermediate cover layer, 1.5 foot protective final cover layer, and 0.5 foot vegetative cover soil layer.
- The final cover surface area for Phase II is 2,659,448 square feet.
- Final Cover Soil Volume = 3 feet x 2,659,448 sq. feet / 27 feet/cu. yard = 295,494 cu. yards
- Operational Air Space Used in Phase II as of December 1, 2012 from comparing surface of waste fill from December 1, 2012 topographic survey to Phase II Bottom Liner As-built is 757,907 cu. yards. The surface volume report prepared by HDR Engineering, Inc. is provided in Attachment A.
- Average Monthly Waste Acceptance Rate is 22,088 tons/month from 2012 waste tonnage records. See table provided in Attachment B.
- Apparent Landfill Density equal to contractual density of 1,428 lb/cy. The apparent landfill density is waste tonnage measured by the scales divided by the Operational Air Space Used which includes waste and initial (daily) cover soils.
- Operational Air Space Available, Used, and Remaining include the volume of waste and initial (daily) cover soils.

Calculations:

1. Total Phase II Air Space – Final Cover Soil Volume = Operational Air Space Available

$$6,000,000 \text{ cu. yards} - 295,494 \text{ cu. yards} = 5,704,506 \text{ cu. yards}$$

2. Operational Air Space Available – Operational Air Space Used in Phase II as of December 2012 = Operational Air Space Remaining

$$5,704,506 \text{ cu. yards} - 757,907 \text{ cu. yards} = 4,946,599 \text{ cu. yards}$$

RECEIVED
APR 12 2013
FDEP South District

3. Operational Air Space Remaining x Apparent Landfill Density = Remaining Waste Tonnage

$$4,946,599 \text{ cu. yards} \times 1,428 \text{ lbs/cu. yard} / 2000 \text{ lbs/ton} = 3,531,871 \text{ tons}$$

4. Remaining Waste Tonnage / Average Monthly Waste Acceptance Rate = Remaining Site Life

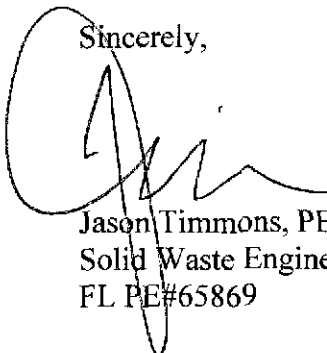
$$3,531,871 \text{ tons} / 22,088 \text{ tons/month} = 159.9 \text{ months} = 13.3 \text{ years from December 1, 2012}$$

Therefore, the Phase II Landfill is projected to reach capacity on or about March 2026 assuming 0% increase in waste tonnage through the operational life of Phase II.

Using the average annual population increase estimates through 2026 from the Florida Demographic Estimating Conference, February 2013 and UF, BEBR, Florida Population Studies, Volume 46, Bulletin 165, March 2013 medium county projections, an average annual tonnage increase of 1.2% would decrease the remaining site life of Phase II to 149 months (12.4 years). This results in Phase II reaching capacity on or about April 2025.

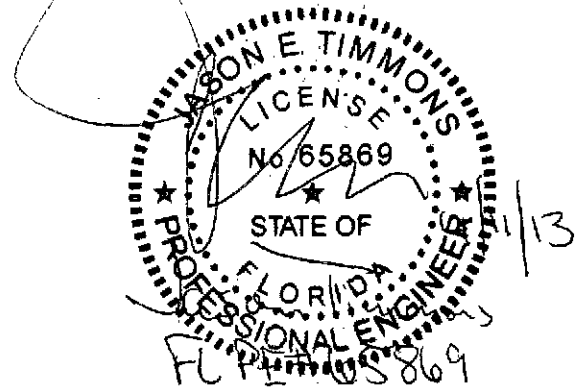
Please contact me anytime at 941-861-1572 if you have questions or require additional information regarding the site life report and attachments.

Sincerely,



Jason Timmons, PE
Solid Waste Engineer
FL PE#65869

Xc: Lois Rose, Sarasota County
Richard Siemering, HDR Engineering, Inc.



Attachments (2)

- Attachment A - Topographic Survey and Volume Report
- Attachment B - Monthly Waste Tonnage

RECEIVED
APR 12 2013
D.E.P. South District

ATTACHMENT A

TOPOGRAPHIC SURVEY

DECEMBER 1, 2012

and

SURVEY VOLUME REPORT

RECEIVED
APR 12 2013
D.E.P. South District

Volume Calculations

From: Luis Rodriguez

Sent: Friday, April 10, 2013

To: Richard Siemering

Subject: Sarasota II Class I Landfill Expansion.doc

Sarasota II Class I Landfill Expansion

Surface: Compare Surface Sarasota_DEC-2012 vs Sand Surface

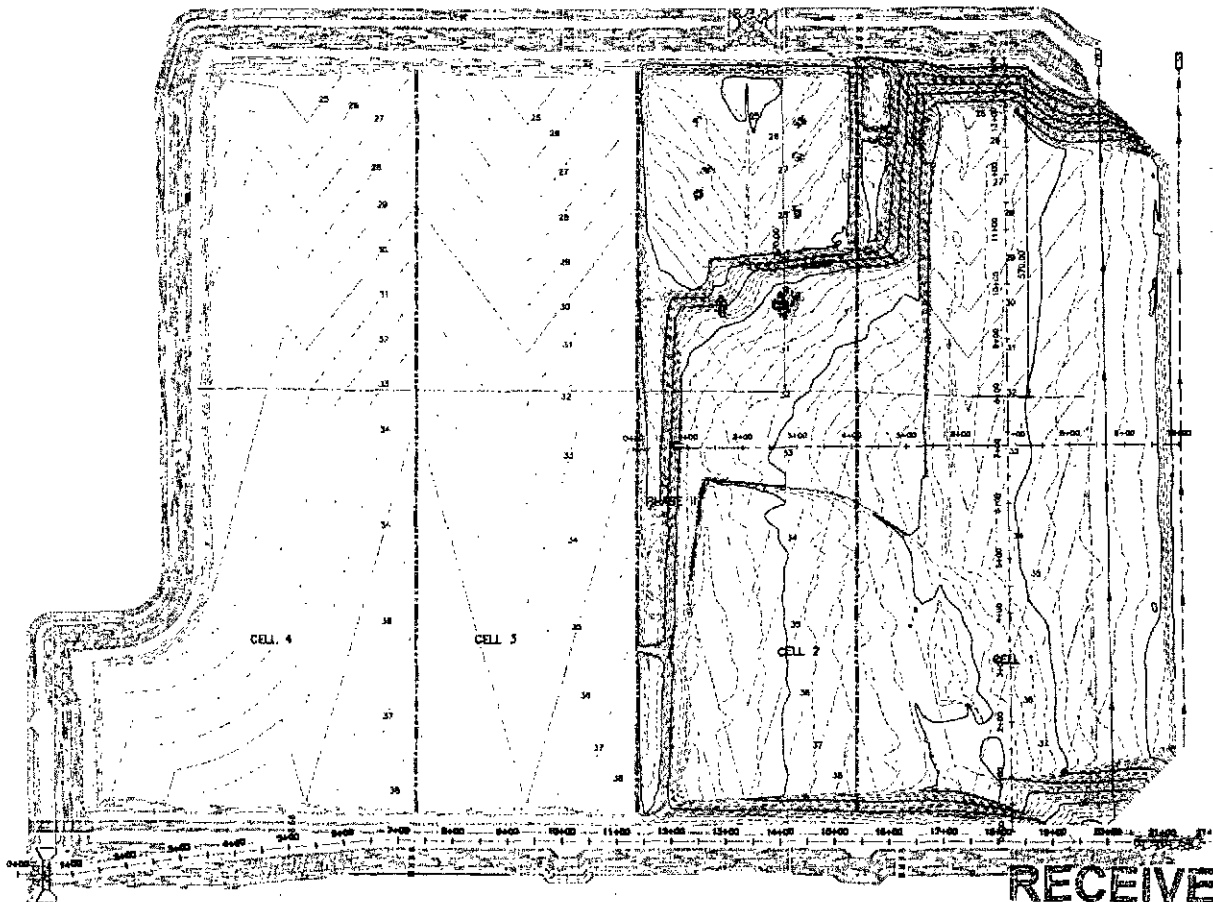
Volume Cut: 0

Volume Fill: 757,907.19

Volume Total: 757,907.19

Compare Surface: Sarasota_DEC-2012

Base Surface: Sand Surface



RECEIVED

APR 12 2013

D.E.P. South District

Volume Calculations

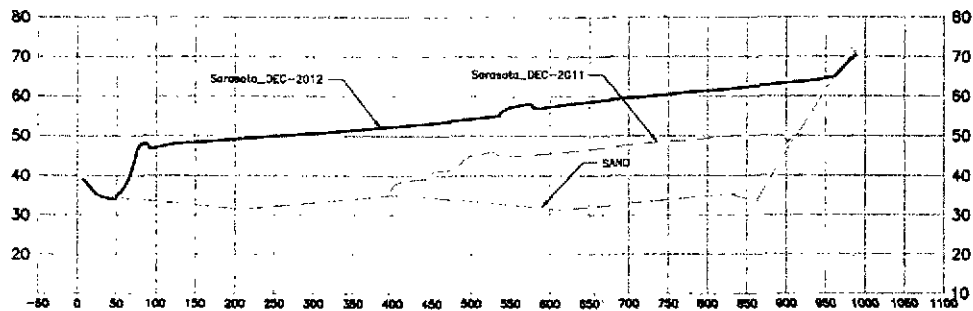
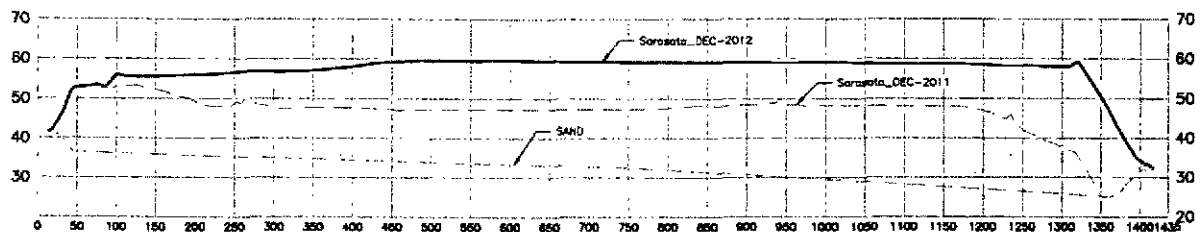
From: Luis Rodriguez

Sent: Friday, April 10, 2013

To: Richard Siemering

Subject: Sarasota II Class I Landfill Expansion.doc

Sarasota II Class I Landfill Expansion



RECEIVED

APR 12 2013

D.E.P. South District

ATTACHMENT B

CCSWDC MONTHLY CLASS I LANDFILL TONNAGE ACCEPTED

RECEIVED

APR 12 2013

D.E.P. South District

CCSWDC Monthly Tonnage to Class I Landfill December 2011 to November 2012

Month	Tonnage to Class I Landfill
Dec-11	20,649
Jan-12	23,454
Feb-12	23,049
Mar-12	24,660
Apr-12	22,820
May-12	21,507
Jun-12	20,630
Jul-12	23,105
Aug-12	24,649
Sep-12	18,663
Oct-12	21,184
Nov-12	20,689
Average	22,088
Total	265,057

Source: CCSWDC scalehouse tonnage reports.

RECEIVED

APR 12 2013

D.E.P. South District

THIS PLAN HAS BEEN DEVELOPED BY AERIAL PHOTOGRAMMETRIC METHODS FROM PHOTOGRAPHS DATED 12-01-2012
MAPPING DONE BY:

KUCERA INTERNATIONAL INC.

HEADQUARTERS: WILLOUGHBY, OHIO
PLANT CITY, FL - COLUMBUS, OH - PITTSBURGH, PA

Topographic survey of lands in Secs. 2 & 3, Twp. 38S, Range 19 E. Sarasota Co., FL
This topographic map and attached report are not valid without the signature and seal of a Florida licensed surveyor and mapper which can be found on the map and report are not full and complete without the other.

Antalovich, Sr. P.S.M. No. LS5437

NOTES: Accuracy Specifications

1) The contours depicted on this map were compiled to national map accuracy standards by Kucera International, Inc., Willoughby, Ohio, using photogrammetric methods from aerial photography taken 12-01-12. Contours which are in wooded or dense vegetation areas are approximations only and should be treated as 'dashed contours'.

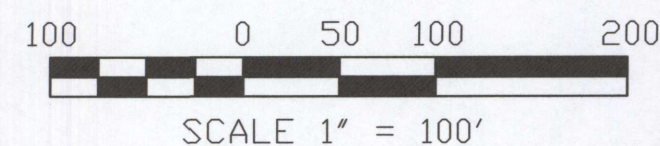
2) Buildings are shown roofline only.

SHEET INDEX

1	2
3	4

LEGEND

- 680 5' CONTOUR ELEVATION, FEET (MSL)
- 1' CONTOUR
- FENCE
- DIRT / UNIMPROVED ROAD
- TREE LINE
- DITCH (WATER) LINE
- CONTROL POINT
- SPOT ELEVATION
- POWER POLE
- NON-UTILITY POLE
- GUYWIRE
- LIGHT POLE
- POST
- SIGN
- TREE
- CATCH BASIN
- PIPE INLET
- MANHOLE



VEOLIA ENVIRONMENTAL SERVICES
4000 Knights Trail Road
Nokomis, Florida 34275

Revisions

No.	Description	Date	By	No.	Description	Date	By

Approved By:

Checked By:

Drawn By:

Project Location:

**SITE TOPOGRAPHIC MAP
NOKOMIS, FL**

SARASOTA LANDFILL

Drawing No.

T-01-05075-175

Scale:

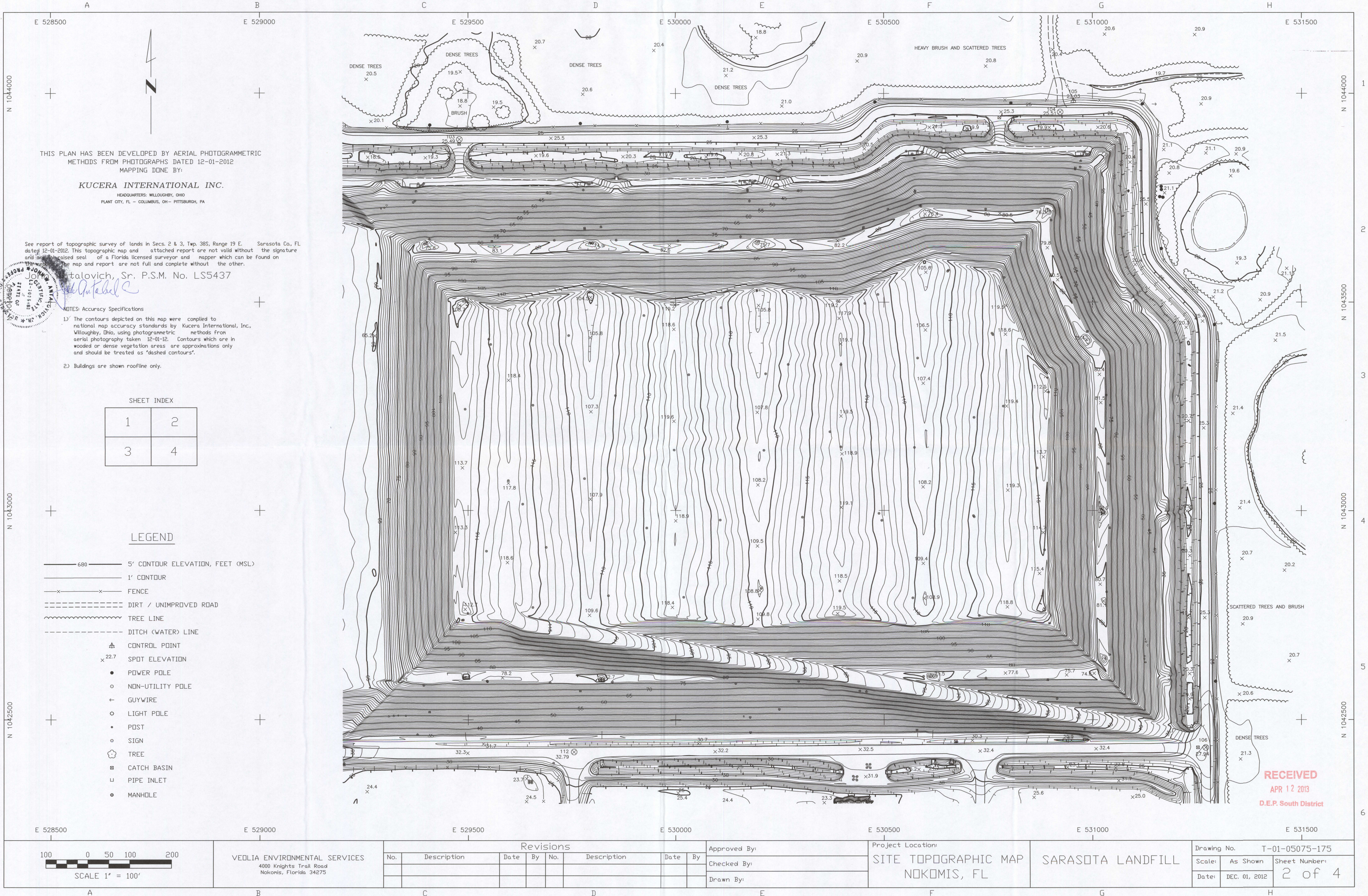
As Shown

Sheet Number:

Date:

DEC. 01, 2012

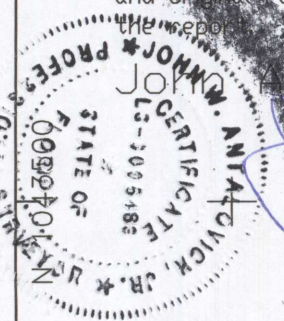
1 of 4



THIS PLAN HAS BEEN DEVELOPED BY AERIAL PHOTOGRAMMETRIC METHODS FROM PHOTOGRAPHS DATED 12-01-2012
MAPPING DONE BY:

KUCERA INTERNATIONAL INC.
HEADQUARTERS: WILLOUGHBY, OHIO
PLANT CITY, FL - COLUMBUS, OH - PITTSBURGH, PA

See report of topographic survey of lands in Secs. 2 & 3, Twp. 38S, Range 19 E, Sarasota Co., FL dated 12-01-2012. This topographic map and attached report are not valid without the signature and official raised seal of a Florida licensed surveyor and mapper which can be found on the map and report are not full and complete without the other.



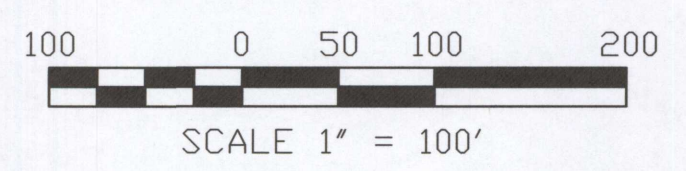
John J. Stalovich, Sr., P.S.M. No. LS5437

- NOTES: Accuracy Specifications
- 1.) The contours depicted on this map were compiled to national map accuracy standards by Kucera International, Inc., Willoughby, Ohio, using photogrammetric methods from aerial photography taken 12-01-12. Contours which are in wooded or dense vegetation areas are approximations only and should be treated as "dashed contours".
 - 2.) Buildings are shown roofline only.

SHEET INDEX	
1	2
3	4

LEGEND

- 680 5' CONTOUR ELEVATION, FEET (MSL)
- 1' CONTOUR
- FENCE
- DIRT / UNIMPROVED ROAD
- TREE LINE
- DITCH (WATER) LINE
- CONTROL POINT
- SPOT ELEVATION
- POWER POLE
- NON-UTILITY POLE
- GUYWIRE
- LIGHT POLE
- POST
- SIGN
- TREE
- CATCH BASIN
- PIPE INLET
- MANHOLE



VEDLIA ENVIRONMENTAL SERVICES
4000 Knights Trail Road
Nokomis, Florida 34275

Revisions					
No.	Description	Date	By	No.	Description

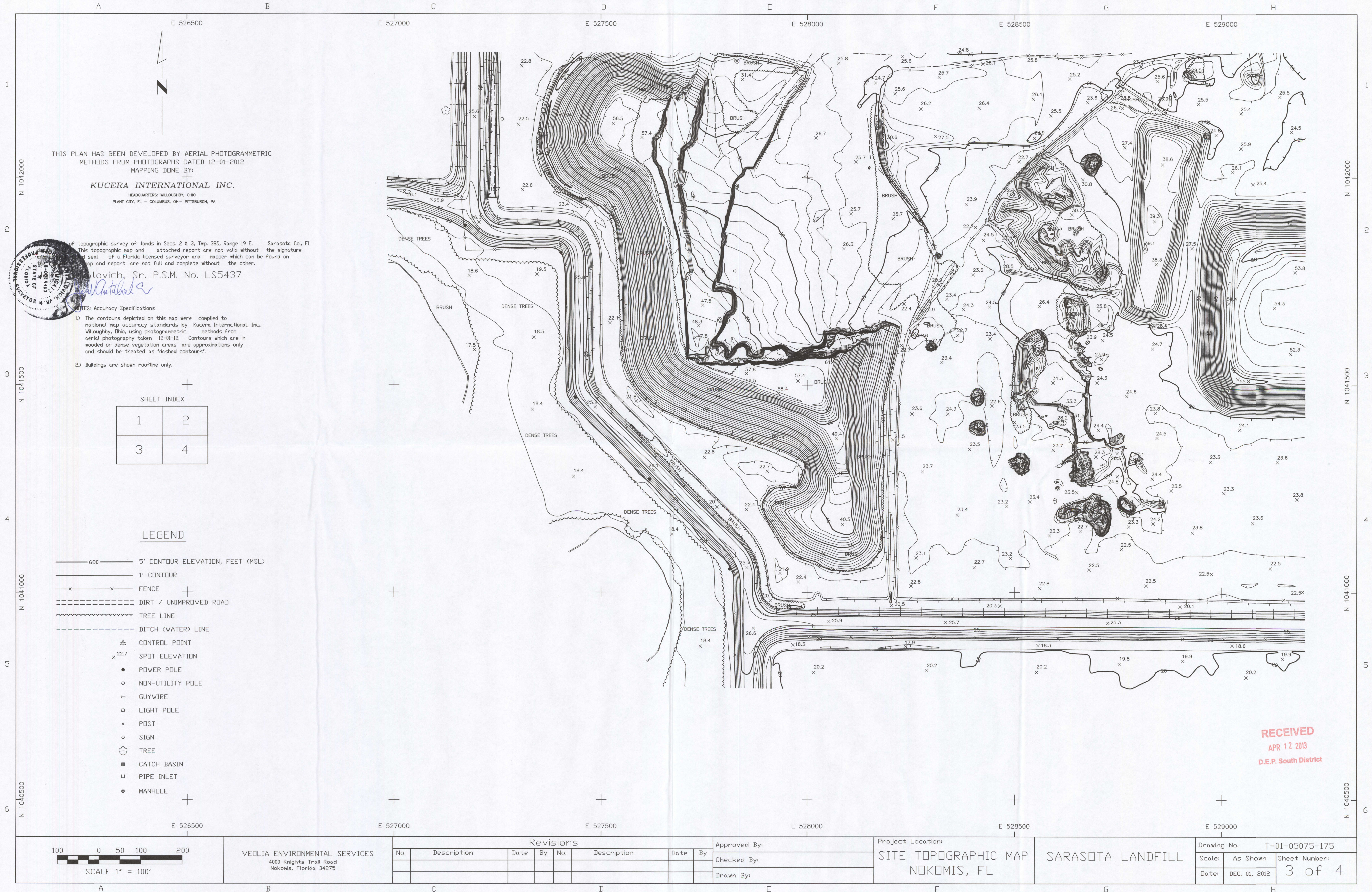
Approved By: _____
Checked By: _____
Drawn By: _____

Project Location:
**SITE TOPOGRAPHIC MAP
NOKOMIS, FL**

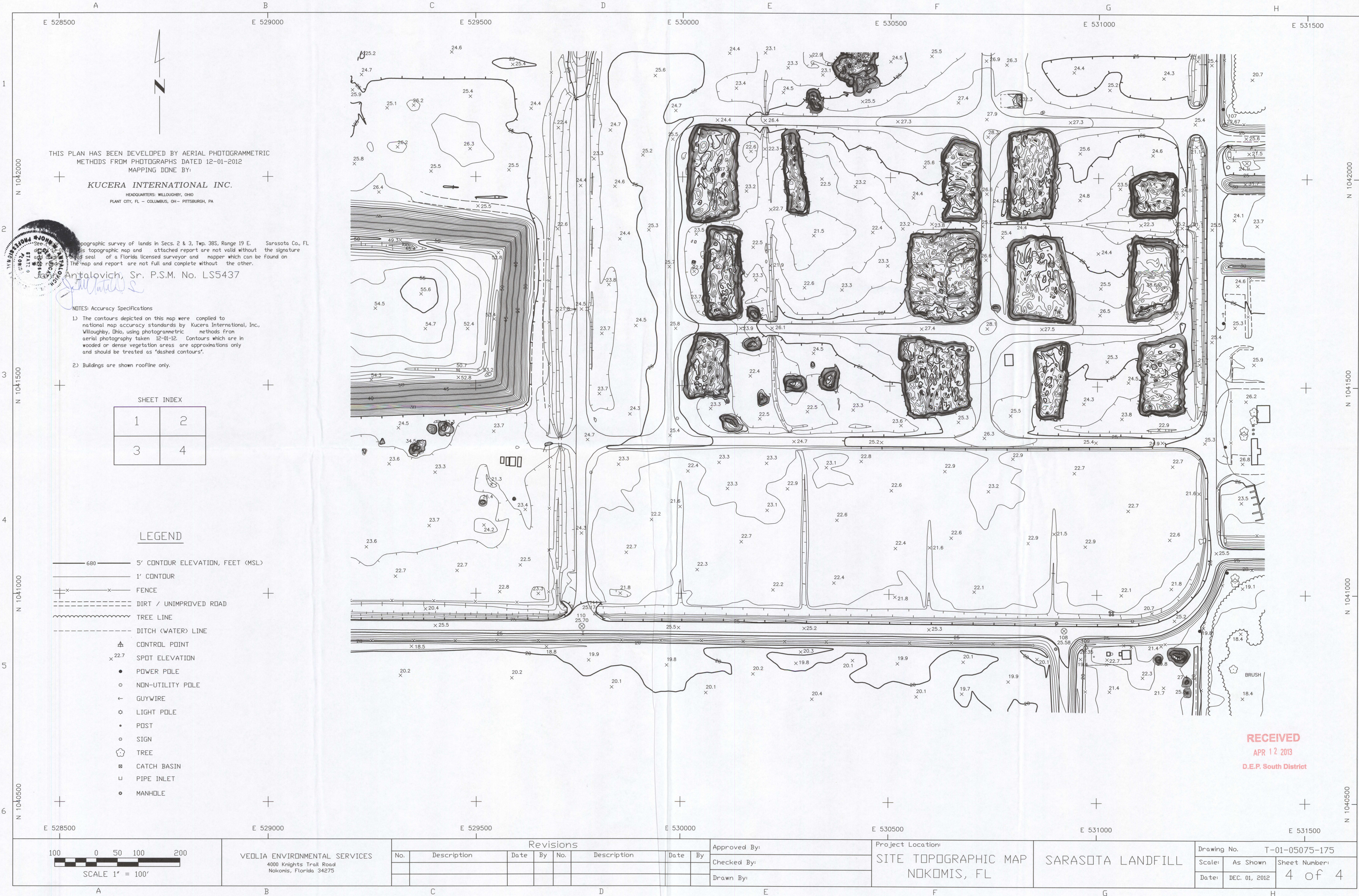
SARASOTA LANDFILL

Drawing No. T-01-05075-175
Scale: As Shown
Sheet Number: 2 of 4
Date: DEC. 01, 2012

RECEIVED
APR 12 2013
D.E.P. South District



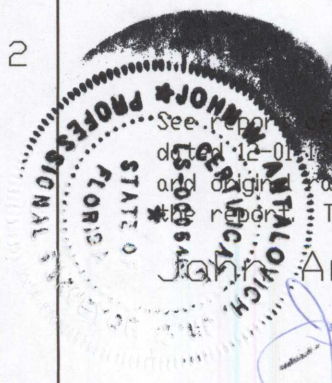
RECEIVED
APR 12 2013
D.E.P. South District



THIS PLAN HAS BEEN DEVELOPED BY AERIAL PHOTOGRAMMETRIC METHODS FROM PHOTOGRAPHS DATED 12-01-2012
MAPPING DONE BY:

KUCERA INTERNATIONAL INC.

HEADQUARTERS: WILLOUGHBY, OHIO
PLANT CITY, FL - COLUMBUS, OH - PITTSBURGH, PA



This topographic survey of lands in Secs. 2 & 3, Twp. 38S, Range 19 E, Sarasota Co., FL, is a true and correct copy of the original topographic map and attached report are not valid without the signature and seal of a Florida licensed surveyor and mapper which can be found on the map and report are not full and complete without the other.

John Antalovich, Sr. P.S.M. No. LS5437

NOTES: Accuracy Specifications

1) The contours depicted on this map were compiled to national map accuracy standards by Kucera International, Inc., Willoughby, Ohio, using photogrammetric methods from aerial photography taken 12-01-12. Contours which are in wooded or dense vegetation areas are approximations only and should be treated as 'dashed contours'.

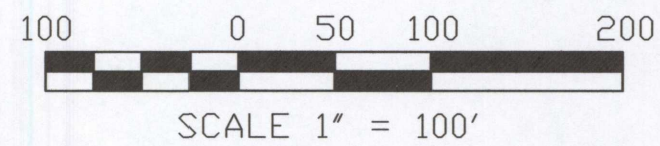
2) Buildings are shown roofline only.

SHEET INDEX

1	2
3	4

LEGEND

- 680 5' CONTOUR ELEVATION, FEET (MSL)
- 1' CONTOUR
- FENCE
- DIRT / UNIMPROVED ROAD
- TREE LINE
- DITCH (WATER) LINE
- CONTROL POINT
- SPOT ELEVATION
- POWER POLE
- NON-UTILITY POLE
- GUYWIRE
- LIGHT POLE
- POST
- SIGN
- TREE
- CATCH BASIN
- PIPE INLET
- MANHOLE



VEDLIA ENVIRONMENTAL SERVICES
4000 Knights Trail Road
Nokomis, Florida 34275

Revisions

No.	Description	Date	By	No.	Description	Date	By

Approved By:
Checked By:
Drawn By:

Project Location:

SITE TOPOGRAPHIC MAP
NOKOMIS, FL

SARASOTA LANDFILL

Drawing No. T-01-05075-175

Scale: As Shown Sheet Number:

Date: DEC. 01, 2012 4 of 4