IN SWD_ waste

Board of County Commissioners
DEPARTMENT OF PUBLIC WORKS
SOLID WASTE MANAGEMENT DIVISION
P.O. Box 340, Lecanto, Florida 34460
Telephone: (352) 527-7670 FAX: (352) 527-7672
TDD Telephone 527-5303
email: landfillinfo@bocc.citrus.fl.us
Citrus Springs/Dunnellon/Inglis/Yankeetown area Toll Free (352) 489-2120

December 3, 2013

Mr. Steve Morgan
Dept of Environmental Protection
13051 N Telecom Parkway
Temple Terrace, Fl 33637-0926

Re: Citrus County Central Class I Landfill (FDEP Permit No. 21375-018-S0/01)
Annual Site Life Calculation Transmittal for Phases 1/1A, 2 and 3

Dear Mr. Morgan:

Pursuant to Specific Condition # C.13.e. of the subject operation permit (which requires landfill site life calculations to be submitted annually no later than January 15th of each year), please find enclosed 2013 Site Life Calculations reports and supporting documentation prepared by Citrus County Division of Engineering.

If you should need additional information, please let me know.

Dept. of Environmental Protection
DEC 0 6 2013
Southwest District

Sincerely,

T. Casey Stephens
Director, Citrus County
Division of Solid Waste Mgt

CC: Jeff Rogers, P.E. Director, Dept. Of Public Works (electronic)
Susan Sullivan, Finance (electronic)

Cjw-k: F:\Shared\DPW\SWM\FDEP Site Life Reports\Site Life Report.Transmittal 2013/DEP.2013 Site Life Report.doc

DEPARTMENT OF PUBLIC WORKS
DIVISION OF ENGINEERING
3600 W. Sovereign Path, Suite 241
Lecanto, Florida 34461

Telephone: (352) 527-5446 Fax: (352) 527-5476
Citrus Springs/Dunnellon/Inglis/Yankeetown area - Toll Free (352) 489-2120
TTY Telephone: (352) 527-0825 or (352) 527-5312

CITRUS COUNTY CENTRAL LANDFILL

OCTOBER 2013 SITE LIFE CALCULATION ANNUAL REPORT

FDEP PERMIT NO. 21375-018-S0/01

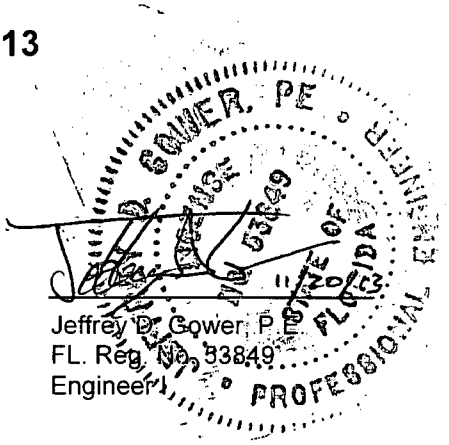
PHASES 1/1A, 2 and 3

Located in S1/T19S/R18E, Citrus County, Florida

Prepared for:

Citrus County Department of Public Works
Solid Waste Management Division
Attn: Casey T. Stephens, Director
230 W. Gulf-to-Lake Highway
Lecanto, FL 34461
(352) 527-7670

Prepared on November 20, 2013



Jeffrey D. Gower, P.E.
FL. Reg. No. 53849
Engineer

Citrus County's Department of Public Works - Division of Engineering and Department of Planning and Development – Land Development Division has calculated the remaining site life for Phases 1/1A, 2 and 3 of the Citrus County Central Landfill based on the past twelve months of data. The remaining airspace was estimated using population projections, projections of future waste receipts and topographic survey efforts performed by the Citrus County Survey Section in September 2013. The topographic survey information was compiled using real time kinematic satellite navigation (GPS) and is based on NAVD88 datum.

Phases 1/1A, 2, and 3:

The airspace consumed from October 2, 2012 (the date of the last topographic survey as prepared by Citrus County and as referenced in the January 2013 Site Life Calculation Report) to September 30, 2013 (the date of the current survey) was calculated by comparing the surface contours from the two surveys. The calculated airspace consumed during this time period was 73,723 CY, as shown on Sheet 1 of 3 of the Volume Calculation Drawings, Attachment A.

Upon review and comparison of the above referenced airspace volume and corresponding volumes from previously submitted reports, the calculated airspace volume initially appeared erroneous. An additional survey was performed by Citrus County on October 2, 2013 to confirm the results obtained from the September 30, 2013 survey. The County Surveyor reevaluated the survey data and provided an assessment regarding the lower than anticipated volume: refer to the Surveyors Report, as shown in Attachment B. Based upon this evaluation, the calculated airspace volume reported appears to be consistent with the collected survey data.

The effective density of the waste deposited in the landfill was estimated by comparing the waste tonnage records supplied by Citrus County Solid Waste Management Division for the same period (81,326 tons) to the airspace consumed. The estimated effective density was determined to be 2,206.26 pounds per cubic yard. This translates to an effective airspace consumption rate of 0.91 CY per ton of waste disposed. The volume of the Cap was entered on the calculation as zero. The volume of the cap was reduced from the Airspace Available Volume Calculation of 1,966,148 CY. The calculated effective density and consumption rate are shown in the Site Life Calculations in Attachment C and are supported by Sheet 2 of 3 of the Volume Calculation Drawings, Attachment A.

The remaining life through build out of Phases 1/1A, 2 and 3 was estimated by multiplying the future projected quantities of waste by the effective airspace consumption rate. Waste tonnage was assumed to increase each year at the same rate as the population as estimated by the "High" projections in the University of Florida Bureau of Economic and Business Research (BEBR) population projections for Citrus County: Attachment D. The projected waste tonnage for each year was multiplied by the effective airspace consumption rate to obtain the airspace volume consumed each year. This is then subtracted from the remaining airspace for each year until the available airspace is depleted. The calculations indicate that Phases 1/1A, 2, and 3 have approximately 1,966,148 CY of available airspace as of the September 30, 2013 survey (Attachment A, Sheet 2 of 3) and that this airspace could be completely utilized by January 2034 (Attachment C). This assumes that all waste will continue to be disposed of in the landfill. For quick reference, the previous Site Life Calculation Report prepared in January 2013 estimated this date to be January 2026 using the "High" projection.

Specific Conditions

Specific Condition C.13.e. of the FDEP permit (Permit No. 21375-018-S0/01) requires:

> *The owner or operator shall conduct a topographic survey of, and shall estimate the remaining disposal capacity and site life of each disposal area as required by Rule 62-701.500(13)(c), F.A.C. Annually, no later than January 15th each year, a copy of this survey, supporting capacity calculations, signed and sealed by a registered professional engineer and/or licensed professional land surveyor as appropriate shall be submitted to the Department. The survey shall demonstrate that the above-grade side slopes are no greater than the design slopes, that the top elevation does not exceed design elevation, and that all other design features and related improvements conform to the Department-approved permit drawings. The capacity estimate shall include updated design life calculations.*

As shown in the cross-sections provided on the Volume Calculation Drawings, Sheet 3 of 3, Attachment A, the above grade side slopes appear to be less than or equal to the design slopes, the design top elevation of the landfill has not been attained, and all other features and related improvements are in conformance with the approved permit drawings.

ATTACHMENT A

VOLUME CALCULATION DRAWINGS

(Refer to 24' x 36" Drawings)

ATTACHMENT B

SURVEYORS REPORT
CITRUS COUNTY
LANDFILL VOLUMES 2013

SURVEYORS REPORT CITRUS COUNTY LANDFILL VOLUMES 2013

The Citrus County Survey Section personnel performed a topographic survey to determine Annual volumes at the Citrus County Landfill on September 30th and October 2nd, 2013. The work was performed using Topcon RTK GPS Rovers owned by Citrus County. The data was collected as NAD 83 Fl West / NAVD '88. The subject area was Cell no. 3 and the adjacent cell south of Cell no. 3 as both received waste in 2013. The 2013 volume was computed using the 2012 volume base map. The 2012 volumes were calculated using a 2011 aerial base map. The data for this 2011 aerial mapping was created by an outside vendor hired by the Solid Waste Division.

We also did the 2012 Annual Volumes utilizing the same equipment noted above. This work was performed in September of 2012. We determined at that time per conversations with Solid Waste personnel that the majority of the previous years waste had been placed in the bottom of cell 3, but a small amount had been placed at the Southwest corner of the adjacent southern cell. These were the areas we surveyed in 2012. The rest of the Subject area was not surveyed as no waste was added since the 2011 aerial data collection.

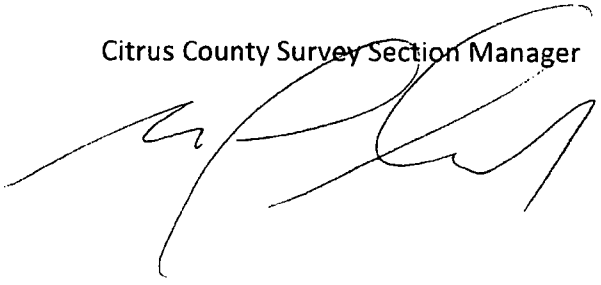
We approached the 2013 Volumes in the same way. In compiling the data in Autocad (Civil 3D 2012 version) I saw significant differences in the slope between Cell 3 and the southern cell. The calculations showed a significant volume missing from this slope, and Solid Waste personnel verified there was nothing added or removed from this area in the last 2 years.

Survey personnel revisited the site and did more intense work on this slope, and compared this data to the 2011 aerial data. The result was the 2013 contours in this area ranged 0.5' to approximately 4 feet lower compared to the 2011 contours. This is reflected in the volume calculations as the "cut" number. These numbers reflect a large percentage of the calculations because of the large area involved.

It is my conclusion that there was either an issue with the original 2011 data, or, the waste under the surface has subsided over the last 2 years.

Mark T. Thomas Fl. PSM 5151

Citrus County Survey Section Manager



ATTACHMENT C

SITE LIFE CALCULATIONS

CITRUS COUNTY SOLID WASTE MANAGEMENT DIVISION
CENTRAL LANDFILL SITE LIFE CALCULATION
NOVEMBER 2013 REPORT

Objective: Calculate the October 2013 remaining site life for Phases 1 thru 3 using waste tonnage records from Citrus County and calculated waste generation projections.

Approach:
1. Calculate the available airspace as of the most recent survey.
2. Calculate the "Effective Density" using volume consumed between October 2012 through September 2013.
3. Use the effective density to calculate the remaining life of the available airspace.

Available Airspace Calculation:

Airspace available from Oct 2013 to Final Grade = 1,966,148 CY

Air volume consumed Oct 2012 through September 2013 = 73,723 CY

Effective Density Calculation:

Waste Disposed of between 10/2012 through 09/2013 = 81,326 tons (per records)

$$\text{Effective Density} = \frac{81{,}326 \text{ ton}}{73{,}723 \text{ CY}} \times \frac{2{,}000 \text{ lbs}}{1 \text{ ton}} = 2{,}206.26 \text{ lbs/CY}$$

$$\text{Effective Airspace Consumption Rate} = \frac{73{,}723 \text{ CY}}{81{,}326 \text{ ton}} = 0.91 \text{ CY/ton}$$

Assuming the waste will be filled up to the final capacity and allowed to settle before placing the cover soil.

Cap Volume = 0 CY

Subtract Cap Volume from air volume (airspace available) to determine useable waste volume for site life calculation.

Remaining Volume= 1,966,148 CY - 0 CY = 1,966,148 CY

Site Life Calculation

The site life calculation is based on Citrus County waste tonnage records and population projections from the University of Florida Bureau of Business and Economic Research (BEBR). The population mirrors the BEBR high estimates and therefore, that population projection was used.

FISCAL YEAR	TONNAGE	VOLUME CONSUMED (CY)	NET REMAINING AIRSPACE (CY)
			1,966,148
2012-2013	81,326	73,723	1,892,425
2013-2014	83,871	76,030	1,816,395
2014-2015	86,415	78,336	1,738,059
2015-2016	88,960	80,643	1,657,416
2016-2017	90,755	82,270	1,575,146
2017-2018	92,550	83,898	1,491,248
2018-2019	94,345	85,525	1,405,723
2019-2020	96,140	87,152	1,318,571
2020-2021	97,936	88,780	1,229,791
2021-2022	99,698	90,377	1,139,414
2022-2023	101,460	91,974	1,047,440
2023-2024	103,222	93,572	953,868
2024-2025	104,983	95,169	858,699
2025-2026	106,745	96,766	761,933
2026-2027	108,430	98,293	663,641
2027-2028	110,114	99,819	563,821
2028-2029	111,798	101,346	462,475
2029-2030	113,482	102,873	359,602
2030-2031	115,166	104,400	255,203
2031-2032	116,772	105,855	149,347
2032-2033	118,378	107,311	42,036
2033-2034	119,985	108,767	-66,732

CONCLUSION: **Estimated Phases 1/1A, 2 & 3 Fill Completion Date = January 2034**

CITRUS COUNTY CENTRAL LANDFILL
WASTE TONNAGE PROJECTION (High)

Year	*Population (BEBR Estimate)	% Change in Population	Tons/Year
2010[1]	**141,236**		
2011[1]	140,956	-0.20%	**81,477**
2012	140,761	-0.14%	81,326
2013	145,307	3.13%	83,871
2014	149,854	3.03%	86,415
2015	**154,400**	**2.94%**	**88,960**
2016	157,580	2.02%	90,755
2017	160,760	1.98%	92,550
2018	163,940	1.94%	94,345
2019	167,120	1.90%	96,140
2020	**170,300**	**1.87%**	**97,936**
2021	173,420	1.80%	99,698
2022	176,540	1.77%	101,460
2023	179,660	1.74%	103,222
2024	182,780	1.71%	104,983
2025	**185,900**	**1.68%**	**106,745**
2026	188,880	1.58%	108,430
2027	191,860	1.55%	110,114
2028	194,840	1.53%	111,798
2029	197,820	1.51%	113,482
2030	**200,800**	**1.48%**	**115,166**
2031	203,640	1.39%	116,772
2032	206,480	1.38%	118,378
2033	209,320	1.36%	119,985
2034	212,160	1.34%	121,591
2035	**215,000**	**1.32%**	**123,197**
2036	217,620	1.20%	124,680
2037	220,240	1.19%	126,163
2038	222,860	1.18%	127,646
2039	225,480	1.16%	129,130
2040	**228,100**	**1.15%**	**130,613**

*Population projection data for Citrus County originated from the University of Florida Bureau of Economic and Business Research (BEBR) Florida Population Studies, Bulletin 165. A linear interpolation for yearly population increase was performed between the years in bold.

[1] Previously reported values: 2010 & 2011 Site Life Calculation Annual reports.

The 2012 "Tons/Year" amount is based on scale house data from Waste Management Department.

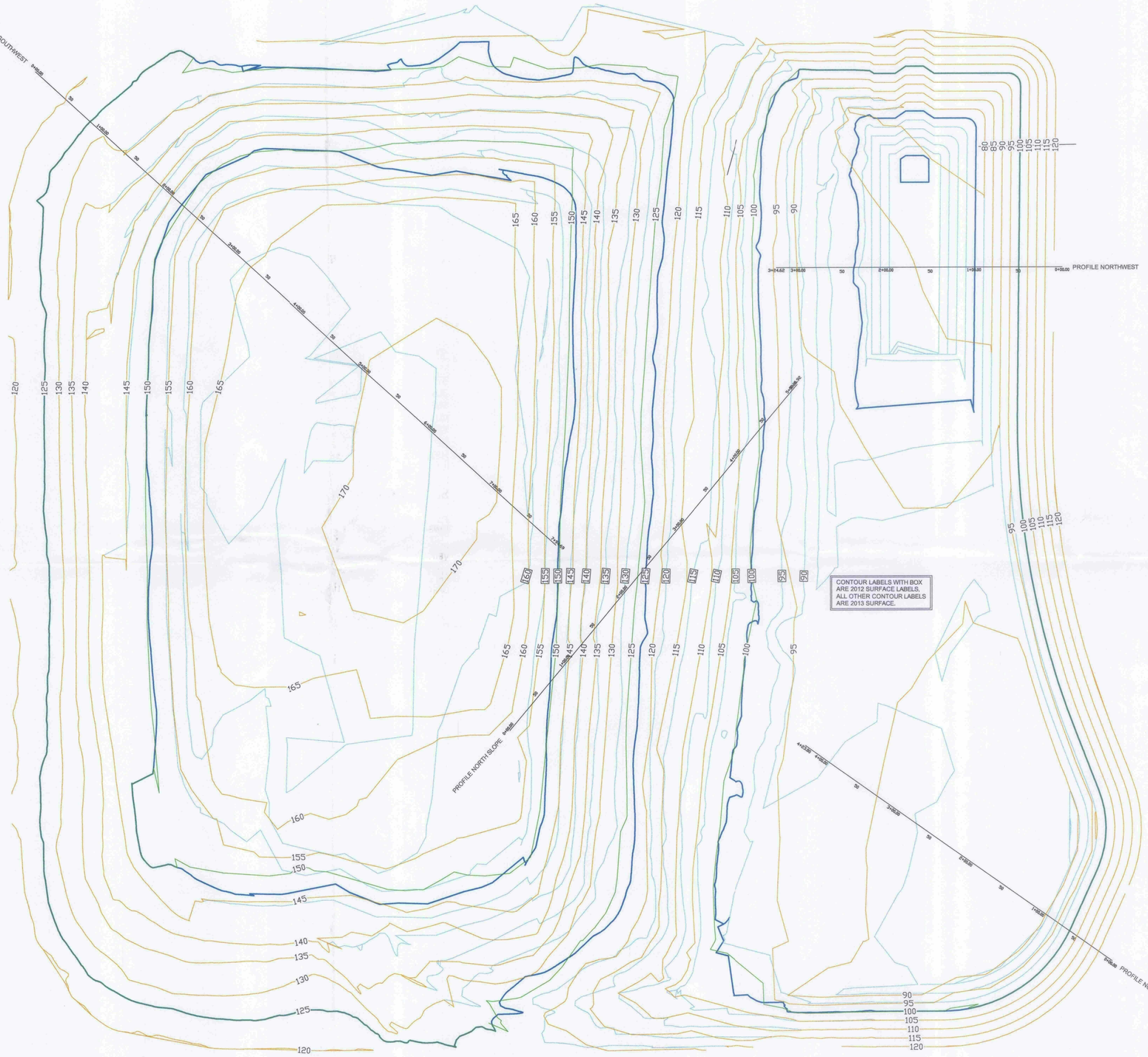
ATTACHMENT D

POPULATION PROJECTIONS

UNIVERSITY OF FLORIDA BUREAU OF ECONOMIC AND BUSINESS RESEARCH (BEBR)

Projections of Florida Population by County, 2015–2040, with Estimates for 2012

County and State	Estimates April 1, 2012	Projections, April 1 2015	2020	2025	2030	2035	2040
ALACHUA	246,770						
Low		237,700	241,900	244,300	244,700	243,500	241,300
Medium		252,900	265,800	277,600	287,900	297,000	305,400
High		268,100	289,700	310,900	331,100	350,500	369,500
BAKER	26,938						
Low		26,600	27,800	28,600	29,100	29,300	29,300
Medium		28,300	30,500	32,500	34,200	35,700	37,100
High		30,000	33,300	36,400	39,300	42,200	44,900
BAY	169,392						
Low		163,700	167,900	170,600	171,700	171,400	169,700
Medium		174,100	184,500	193,900	202,000	209,100	214,800
High		184,600	201,100	217,100	232,300	246,700	259,900
BRADFORD	27,239						
Low		26,400	26,300	26,000	25,600	25,000	24,300
Medium		28,100	28,900	29,500	30,100	30,500	30,800
High		29,800	31,500	33,100	34,600	35,900	37,200
BREVARD	545,625						
Low		526,100	536,800	542,900	544,200	541,100	535,100
Medium		559,700	589,900	616,900	640,200	659,900	677,300
High		593,300	643,000	691,000	736,300	778,700	819,500
BROWARD	1,771,099						
Low		1,690,100	1,684,200	1,673,300	1,656,400	1,633,600	1,606,400
Medium		1,798,000	1,850,800	1,901,500	1,948,700	1,992,200	2,033,500
High		1,905,900	2,017,400	2,129,700	2,241,000	2,350,800	2,460,500
CALHOUN	14,641						
Low		13,700	13,700	13,500	13,200	12,900	12,400
Medium		14,900	15,500	16,100	16,500	16,900	17,300
High		16,100	17,400	18,700	19,900	21,000	22,100
CHARLOTTE	163,357						
Low		157,400	160,300	161,800	162,000	161,100	159,600
Medium		167,400	176,100	183,900	190,500	196,500	202,000
High		177,500	192,000	205,900	219,100	231,800	244,400
CITRUS	140,761						
Low		136,900	142,200	146,100	148,400	149,400	149,000
Medium		145,700	156,300	166,000	174,600	182,200	188,500
High		154,400	170,300	185,900	200,800	215,000	228,100
CLAY	192,071						
Low		191,300	204,100	213,800	220,300	223,400	223,600
Medium		203,500	226,800	248,500	268,700	286,500	302,200
High		215,700	249,500	283,300	317,100	349,500	380,800
COLLIER	329,849						
Low		326,000	344,900	358,800	366,600	368,700	368,300
Medium		346,800	383,200	417,200	447,000	472,700	497,700
High		367,600	421,500	475,600	527,500	576,700	627,100
COLUMBIA	67,729						
Low		65,700	67,700	69,200	70,000	70,100	69,700
Medium		69,900	74,400	78,600	82,300	85,500	88,200
High		74,100	81,100	88,000	94,700	100,900	106,700
DESOTO	34,408						
Low		32,800	32,500	32,100	31,700	31,100	30,500
Medium		34,800	35,700	36,500	37,300	38,000	38,600
High		36,900	38,900	40,900	42,900	44,800	46,800
DIXIE	16,298						
Low		15,800	16,100	16,100	16,000	15,800	15,400
Medium		17,200	18,200	19,200	20,000	20,700	21,400
High		18,600	20,400	22,200	24,000	25,700	27,400



PROFILE VIEWS ARE ON SHEET 3

LEGEND AND ABBREVIATIONS

- EXISTING ELEVATION CONTOUR (25' INTERVAL) 09/30/2013 SURVEY
- EXISTING ELEVATION CONTOUR (5' INTERVAL) 09/30/2013 SURVEY
- PREVIOUS ELEVATION CONTOUR (25' INTERVAL) 10/01/2012 SURVEY
- PREVIOUS ELEVATION CONTOUR (5' INTERVAL) 10/01/2012 SURVEY

SITE VOLUME TABLE

SITE	CITRUS COUNTY CENTRAL LANDFILL
SURFACE 1	OCTOBER 2012 (FIELD SURVEY)
SURFACE 2	SEPTEMBER 2013 (FIELD SURVEY)
CUT UNADJUSTED	30,975 CU. YD.
FILL UNADJUSTED	104,698 CU. YD.
NET UNADJUSTED	73,723 CU. YD.
METHOD	COMPOSITE

SURVEY SOURCE NOTE

FIELD SURVEY PERFORMED BY CITRUS COUNTY SURVEY SECTION USING REAL TIME KINEMATIC (RTK) GLOBAL POSITIONING. THE ESTIMATED POSITIONAL ACCURACY FOR A SURVEY PERFORMED IN THIS MANNER IS ± 0.07'. THE ELEVATIONS ESTABLISHED BY THIS METHOD HAVE AN ACCURACY OF ±0.07' AND REFLECT NORTH AMERICAN VERTICAL DATUM OF 1988 (NAVD '88).

THE BASE TOPOGRAPHY FOR THIS SURVEY IS A MAP PREPARED BY KING ENGINEERING PREPARED FROM PHOTOGRAMMETRY PERFORMED BY PICKETT AND ASSOCIATES DATED 09/15/2011 AND RTK SURVEY PERFORMED BY CITRUS COUNTY SURVEY SECTION DATED 10/1/2012.

CONTOUR ELEVATIONS SHOWN HEREON REFLECT NORTH AMERICAN VERTICAL DATUM OF 1988 (NAVD '88) CONVERTED TO NATIONAL GEODETIC VERTICAL DATUM OF 1929 BY A FACTOR OF +0.85'. CONTOUR INTERVAL IS 5.0 FEET.

SITE BENCHMARKS USED FOR QUALITY CONTROL CHECKING ARE NATIONAL GEODETIC SURVEY (NGS) CONTROL STATIONS "CITRUS 13" AND "CITRUS 14".

Dept. of Environmental Protection
DEC 06 2013
Southwest District

1558604 (1)

3600 SOVEREIGN PATH
SUITE 241
LECANTO, FLORIDA 34461
(352) 527-3446

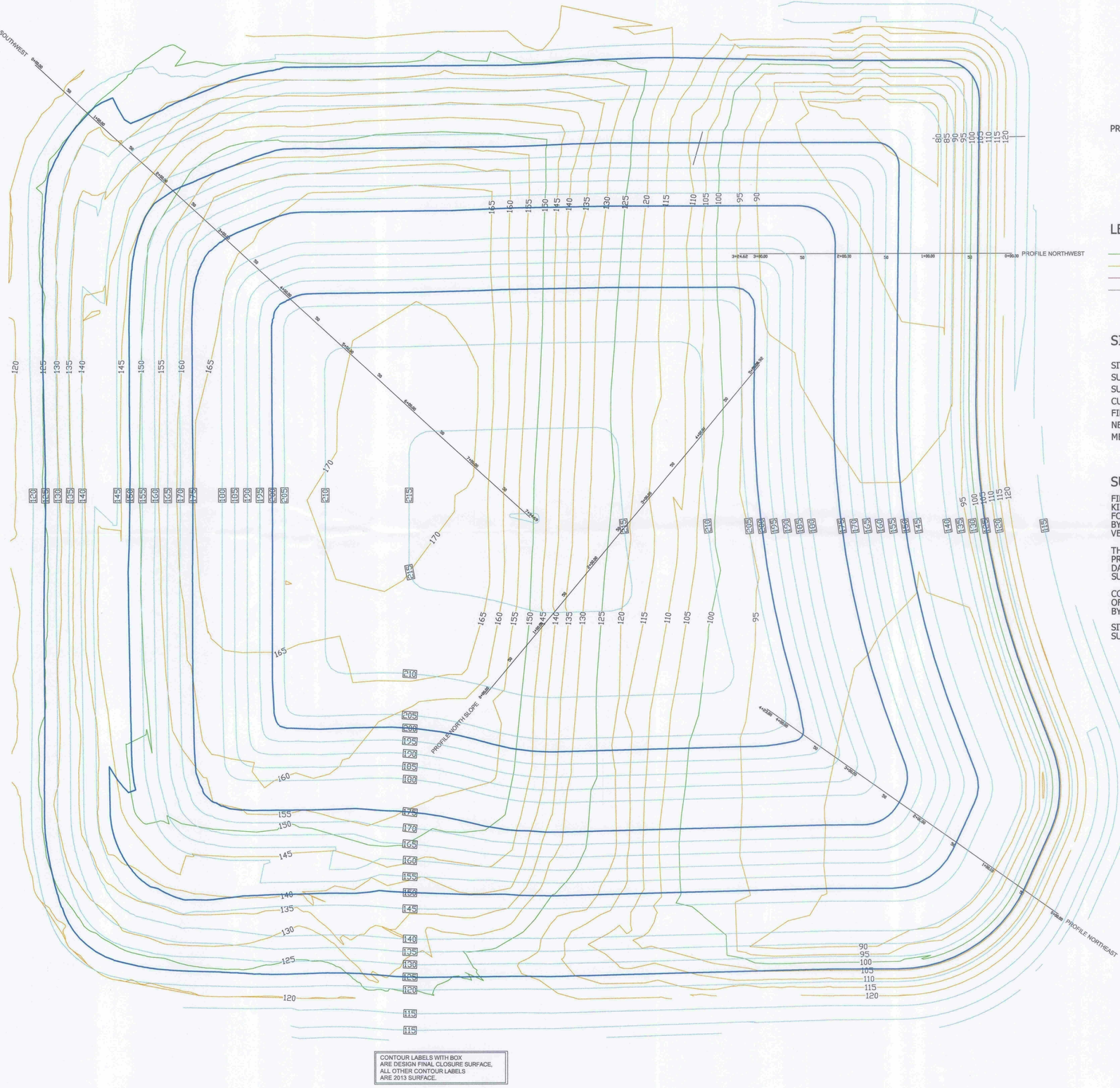
CITRUS COUNTY
DEPARTMENT OF PUBLIC WORKS
DIVISION OF ENGINEERING

CITRUS COUNTY CENTRAL LANDFILL OCTOBER 2013 SITE LIFE CALCULATION REPORT

CITRUS COUNTY CENTRAL LANDFILL FINAL CLOSURE DESIGN vs. 10/01/2013 SURVEY VOLUME ESTIMATE PLAN

JEFFREY D. GOWER, P.E.
ENGINEER I
FL. REG. NO. 53649
10/18/13

PROJECT NO.	SHEET NO.
13-463	1
DATE: 10/18/2013	OF 3
SCALE: 1" = 60'	



PROFILE VIEWS ARE ON SHEET 3

LEGEND AND ABBREVIATIONS

- EXISTING ELEVATION CONTOUR (25' INTERVAL) 09/30/2013 SURVEY
- EXISTING ELEVATION CONTOUR (5' INTERVAL) 09/30/2013 SURVEY
- DESIGN ELEVATION CONTOUR (25' INTERVAL) FINAL CLOSURE
- DESIGN ELEVATION CONTOUR (5' INTERVAL) FINAL CLOSURE

SITE VOLUME TABLE

SITE	CITRUS COUNTY CENTRAL LANDFILL
SURFACE 1	FINAL CLOSURE (DESIGN)
SURFACE 2	SEPTEMBER 2013 (FIELD SURVEY)
CUT UNADJUSTED	14,038 CU. YD.
FILL UNADJUSTED	1,980,187 CU. YD.
NET UNADJUSTED	1,966,148 CU. YD.
METHOD	COMPOSITE

SURVEY SOURCE NOTE

FIELD SURVEY PERFORMED BY CITRUS COUNTY SURVEY SECTION USING REAL TIME KINEMATIC (RTK) GLOBAL POSITIONING. THE ESTIMATED POSITIONAL ACCURACY FOR A SURVEY PERFORMED IN THIS MANNER IS ± 0.07'. THE ELEVATIONS ESTABLISHED BY THIS METHOD HAVE AN ACCURACY OF ±0.07' AND REFLECT NORTH AMERICAN VERTICAL DATUM OF 1988 (NAVD '88).

THE BASE TOPOGRAPHY FOR THIS SURVEY IS A MAP PREPARED BY KING ENGINEERING PREPARED FROM PHOTOGRAMMETRY PERFORMED BY PICKETT AND ASSOCIATES DATED 09/15/2011 AND RTK SURVEY PERFORMED BY CITRUS COUNTY SURVEY SECTION DATED 10/1/2012.

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CITRUS COUNTY
DEPARTMENT OF PUBLIC WORKS
DIVISION OF ENGINEERING
3600 SOVEREIGN PATH
SUITE 241
LECANTO, FLORIDA 34461
(352) 527-5446

(2)

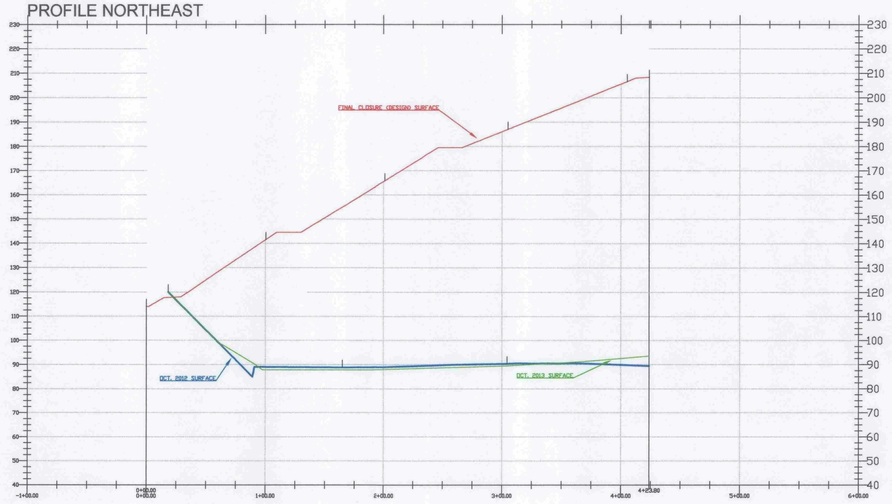
CITRUS COUNTY CENTRAL LANDFILL OCTOBER 2013 SITE LIFE CALCULATION REPORT

CITRUS COUNTY CENTRAL LANDFILL FINAL CLOSURE DESIGN vs. 10/01/2013 SURVEY VOLUME ESTIMATE PLAN

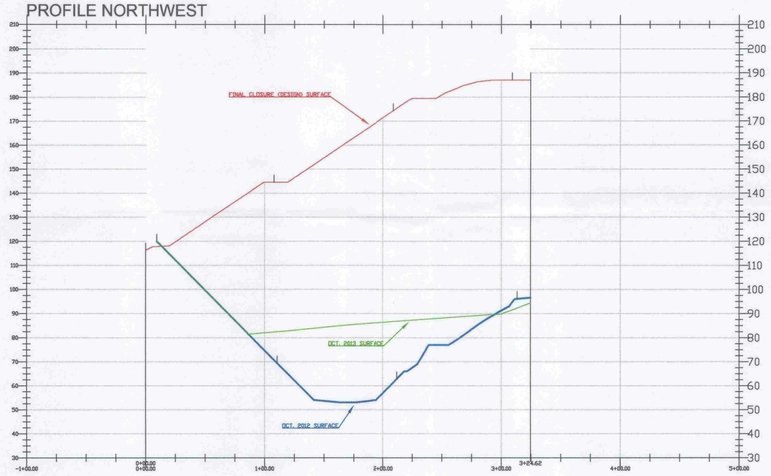
JEFFREY D. GOWER, P.E.
ENGINEER I
FL. REG. NO. 53849

PROJECT NO.	13-463
DATE:	10/18/2013
SCALE:	1" = 60'
SHEET NO.	2
OF	3

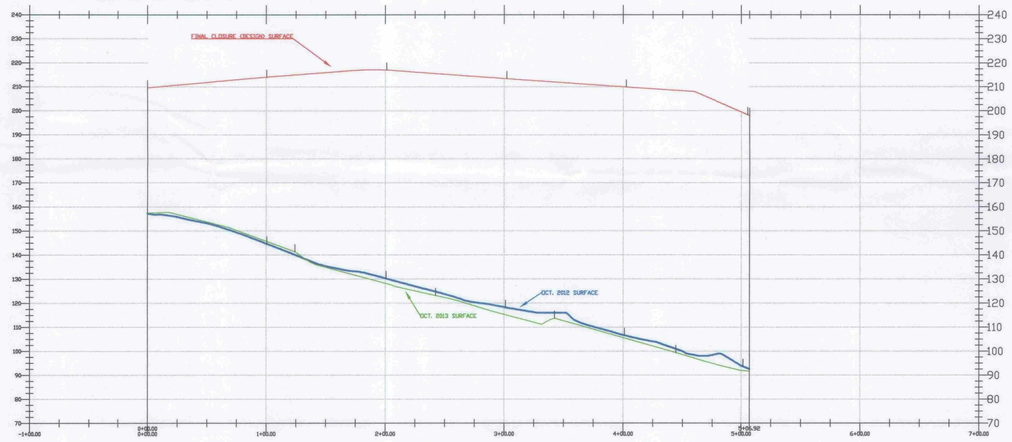
PROFILE NORTHEAST



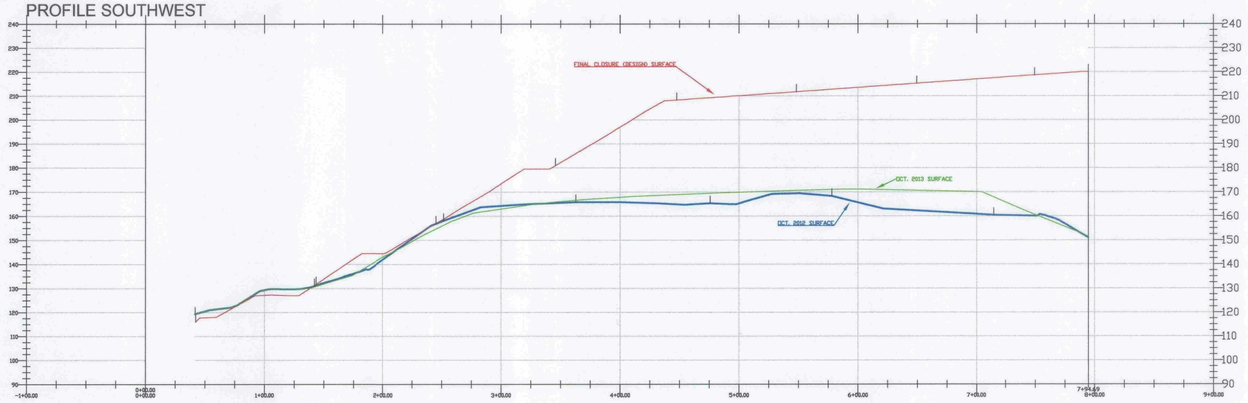
PROFILE NORTHWEST



PROFILE NORTH SLOPE



PROFILE SOUTHWEST



PROFILE PLAN VIEWS ARE ON SHEETS 1 AND 2

LEGEND AND ABBREVIATIONS

SURFACE 1 FINAL CLOSURE (DESIGN)
SURFACE 2 OCTOBER 2012 (FIELD SURVEY)
SURFACE 3 SEPTEMBER 2013 (FIELD SURVEY)

SITE VOLUME TABLE

SITE	CITRUS COUNTY CENTRAL LANDFILL
SURFACE 1	FINAL CLOSURE (DESIGN)
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SURFACE 3	SEPTEMBER 2013 (FIELD SURVEY)

SURVEY SOURCE NOTE

FIELD SURVEY PERFORMED BY CITRUS COUNTY SURVEY SECTION USING REAL TIME KINEMATIC (RTK) GLOBAL POSITIONING. THE ESTIMATED POSITIONAL ACCURACY FOR A SURVEY PERFORMED IN THIS MANNER IS ± 0.07'. THE ELEVATIONS ESTABLISHED BY THIS METHOD HAVE AN ACCURACY OF ±0.07' AND REFLECT NORTH AMERICAN VERTICAL DATUM OF 1988 (NAVD '88).

THE BASE TOPOGRAPHY FOR THIS SURVEY IS A MAP PREPARED BY KING ENGINEERING PREPARED FROM PHOTOGRAMMETRY PERFORMED BY PICKETT AND ASSOCIATES DATED 09/15/2011 AND RTK SURVEY PERFORMED BY CITRUS COUNTY SURVEY SECTION DATED 10/1/2012.

CONTOUR ELEVATIONS SHOWN HEREON REFLECT NORTH AMERICAN VERTICAL DATUM OF 1988 (NAVD '88) CONVERTED TO NATIONAL GEODETIC VERTICAL DATUM OF 1929 BY A FACTOR OF +0.85'. CONTOUR INTERVAL IS 5.0 FEET.

SITE BENCHMARKS USED FOR QUALITY CONTROL CHECKING ARE NATIONAL GEODETIC SURVEY (NGS) CONTROL STATIONS "CITRUS 13" AND "CITRUS 14".

CITRUS COUNTY
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(13)

CITRUS COUNTY
CENTRAL LANDFILL
OCTOBER 2013 SITE
LIFE CALCULATION
REPORT

CITRUS COUNTY CENTRAL LANDFILL

FINAL CLOSURE
10/01/2013 SURVEY
10/01/2012 SURVEY

PROFILES

JEFFREY D. GOWER, P.E.
ENGINEER I
FL. REG. NO. 53849

PROJECT NO.	SHEET NO.
13-463	3
DATE: 10/1/2013	OF 3
SCALE: 1" = 60'	