

PROFESSIONAL SERVICES

- 16. Approve Amendment #16 to PS-332-96/BJC – Engineering Services for Lake Emma Road with Bowyer-Singleton & Associates, Inc. of Orlando (\$142,211.00).**

PS-332-96/BJC – provides for preliminary engineering and final roadway design including landscaping and irrigation plans, design and right-of-way surveys, geotechnical surveys and right-of-way maps with title search for the construction of approximately 2.1 miles of multi-lane collector highway. Amendment #16 will provide additional engineering services necessary to finalize the Lake Emma roadway design plans for the portion of Lake Emma Road that is being widened from 2 to 4 lanes and to close the acquisition for parcel 120 from Silver Lakes West Homeowners Association, (SLWHOA). SLWHOA will not settle the acquisition for parcel 120 until the wall issues are incorporated into the design plans relating to the County’s wall policy.

Revisions to the plans include right-of-way mapping, Silver Lakes Subdivision wall design, Pond 5 right-of-way revisions, Ridge Point Cove analysis, Pond 7 responses, Seminole County Lift Station access, revisions to signing and marking plans, signal plans and irrigation plans.

The following is a summary of the project cost:

Original Contract Sum	\$ 574,997.00
Amendments 1 thru 15	653,403.34
Add Amendment #16	<u>142,211.00</u>
Revised Contract Sum	\$1,370,611.34

Funds are available in accounts 077515.560680 for \$109,502.47 and 077522.560680 for \$32,708.53. Public Works Department// Engineering Division and Fiscal Services Department/ Purchasing and Contracts Division recommend that the Board approve and authorize the Chairman to execute Amendment #16.

**SIXTEENTH AMENDMENT TO ENGINEERING SERVICES AGREEMENT FOR LAKE EMMA ROAD
(LONGWOOD HILLS ROAD TO SAND POND ROAD) (PS-332-96/BJC)**

THIS FIFTEENTH AMENDMENT is made and entered into this _____ day of _____, 20____ and is to that certain Agreement made and entered into on April 19, 1996, as amended on October 8, 1996, May 27, 1997, December 16, 1997, June 1, 1998, October 14, 1998, April 13, 1999, April 3, 2001, May 31, 2001, May 16, 2002, September 16, 2002, Feb 27, 2003, August 14, 2003, April 16, 2004, July 27, 2004, and on December 16, 2005, between **BOWYER, SINGLETON & ASSOCIATES, INC.**, whose address is 520 South Magnolia Avenue, Orlando, Florida 32801, hereinafter referred to as "CONSULTANT", and **SEMINOLE COUNTY**, a political subdivision of the State of Florida, whose address is Seminole County Services Building, 1101 East First Street, Sanford, Florida, hereinafter referred to as "COUNTY."

W I T N E S S E T H:

WHEREAS, the CONSULTANT and COUNTY entered into the above-referenced Agreement on April 19, 1996, as amended on October 8, 1996, May 27, 1997, December 16, 1997, June 1, 1998, October 14, 1998, April 13, 1999, April 3, 2001, May 31, 2001, May 16, 2002, September 16, 2002, Feb 27, 2003, August 14, 2003, April 16, 2004, July 27, 2004, and on December 16, 2005, for preliminary engineering services for the COUNTY's Lake Emma Road project in Seminole County; and

WHEREAS, the parties desire to amend the Agreement so as to enable both parties to continue to enjoy the mutual benefits it provides; and

WHEREAS, Section 20 of the Agreement provides that any amendments shall be valid only when expressed in writing and duly signed by the parties,

NOW, THEREFORE, in consideration of the mutual understandings and agreements contained herein, the parties agree to amend the Agreement as follows:

1. The Scope of Services attached to the Agreement is increased to provide for the additional services provided in the attached Exhibit "A", which is incorporated by this reference.

2. The COUNTY agrees to compensate CONSULTANT the fixed fee sum of ONE HUNDRED FORTY-TWO THOUSAND TWO HUNDRED ELEVEN AND NO/100 DOLLARS (\$142,211.00) for the increased Scope of Services. The total fixed fee compensation through this Sixteenth Amendment is the fixed sum of ONE MILLION THREE HUNDRED SEVENTY THOUSAND SIX HUNDRED ELEVEN AND 34/100 DOLLARS (\$1,370,611.34). In no event shall CONSULTANT be paid more than the fixed fee sum stated above.

3. Except as herein modified, all terms and conditions of the Agreement shall remain in full force and effect for the term of the Agreement as originally set forth in said Agreement and subsequent Amendments thereto.

IN WITNESS WHEREOF, the parties hereto have executed this instrument for the purpose herein expressed.

ATTEST:

BOWYER, SINGLETON &
ASSOCIATES, INC.

CYNTHIA L. THOMAS, Secretary
(CORPORATE SEAL)

By: _____
JAMES W. BOWYER, President

Date: _____

BOARD OF COUNTY COMMISSIONERS
SEMINOLE COUNTY, FLORIDA

ATTEST:

MARYANNE MORSE
Clerk to the Board of
County Commissioners of
Seminole County, Florida.

By: _____
CARLTON HENLEY, Chairman

Date: _____

For the use and reliance
of Seminole County only.

Approved as to form and
legal sufficiency.

As authorized for execution
by the Board of County Commissioners
at their _____, 20____
regular meeting.

County Attorney

AC/lpk
1/6/06
ps-332 16 am

Attachment:
Exhibit "A" - Scope of Services

SCOPE OF SERVICES

LAKE EMMA ROAD

PS-537-99/BJC

322-96/BJC

Amendment #14

Consultant shall perform the following tasks:

Task 1 - Right-of-Way Mapping

Seminole County has requested that the legal descriptions and right-of-way maps be revised due to the replacement of portions of the Silver Lakes Subdivision Wall. This effort assumes that the wall is contained within an existing platted tract set aside for the wall. The County wants to confirm ownership of the wall and existing tract. Revisions to the R/W maps, legal descriptions, and title searches are also needed for the parcels with temporary construction easements that were revised or added for the portion of Lake Emma that is changing from 2-lanes to 4-lanes.

Task 2 - Silver Lakes Subdivision Wall

Seminole County has requested that the plans be updated for design of a new taller subdivision wall to replace approximately 650 feet, consisting of two areas, of the existing subdivision wall along the Silver Lakes Subdivision, to meet the County's wall policy. The proposed profile grade of Lake Emma Road is being raised greater than one-foot along portions of the existing wall. The consultant shall develop a design that ensures that there is no retaining wall aspect to the proposed subdivision wall. The proposed subdivision wall will only function as a traditional screen wall. Meetings with the homeowners association are required to coordinate with and inform the residents about the proposed wall. Subdivision wall plans will be prepared for the new wall. Revisions are required to the roadway plan/profile sheets, cross sections, bid forms, and engineer's estimate.

Task 3 - Pond 5 R/W Revisions

Seminole County has requested that the R/W for Pond 5 be revised to reduce the size of parcel 120, and add a drainage easement over the Pond 5 outfall pipe. This requires determining the Pond 5 revised R/W limits and size of the drainage easement. In addition, the drainage easement must be subordinated as these parcels are within an existing Florida Power Corporation easement. Revisions are required to Pond 5 plan sheet, Pond 5 outfall plan sheet, the R/W maps, legal descriptions (parcel 120 and 820), and updated title searches.

Task 4 - Ridge Point Cove Analysis

The Ridge Point Cove subdivision did not dedicate the correct R/W for the proposed Lake Emma roadway improvements, and constructed the subdivision screen wall within the proposed Lake Emma R/W. Seminole County has requested an engineering review (roadway and structural) of this area to determine options to allow the subdivision wall to remain with the new roadway construction. Revisions are required to the plan/profile sheets, cross sections, R/W maps, legal description (parcel 114), and updated title search.

Task 5 - Pond 7 (AT&T Pond) Responses

Seminole County has requested responses and engineering support to the Assistant County Attorney's questions regarding the modifications to Pond 7 (the existing AT&T pond).

Task 6 - Seminole County Lift Station Access

Seminole County Utilities has requested revisions for the lift station access turnout. Revisions are required to the roadway plan/profile sheets, cross sections, bid forms, and engineer's estimate. In addition, a retaining wall must be designed as the height of wall needed for the access drive exceeds the standard FDOT gravity wall. Retaining wall plans will be prepared. Geotechnical analysis is required.

Task 7 - Signing and Marking Plans Revision

Seminole County has requested the signing and marking plans be revised from the 12' and 14' lane configurations as directed to 11', 11' and 4' lane configurations for bicycle path.

Taks 8 - Administration

Updates are required for the requested revisions to the quantity calculations, engineer's estimate and bid forms.

Task 9A - Signalization Plans Updates

Updates are required to the signalization plans to incorporate recent roadway plans changes. The current signal design and structural design will be reviewed to ensure compliance with current standards. The original Signalization Engineer of Record is no longer available to update the plans.

The general notes and mast arm detail sheets must be updated. The pavement markings for the lane widths have been revised to account for a bicycle path. The sidewalk curb ramps/crosswalk configuration at the Longwood Hills Road and Lake Emma Road intersection has been revised due to the elimination of the sidewalk on the south side of Longwood Hills Road. The median configuration at the Sand Pond Road and Lake Emma Road intersection has changed due to improvements shown in Metric Engineering's Lake Emma Road project to the north. Revisions are required to the signalization plans, bid forms, and engineer's estimate.

Task 9B - Signalization Plans Design (Technology Park)

The County has requested a mast arm signal to replace the existing strain pole signal at Technology Park. The mast arm signalization design and plans will be per the County's current standards and will be added with the other signals.

Task 10 - Irrigation Plans Standards Update

Irrigation plans were complete and approved prior to the change in the roadway design (complete 4-lane section). The intent was to add irrigation for the area of the roadway that changed from 2-lane to 4-lane. The irrigation plans must be revised due to the changes in Seminole County's landscape policy. The landscape currently allowed, due to the change in landscape policy, requires design of new zones and system from the previously approved system. A retro-fit of the previous system can not be done.

Task 11 - Irrigation Main Plans

According to Seminole County Utilities, the proposed irrigation system requires an irrigation main to supply water for the system. This requires the design of an irrigation main and developing miscellaneous construction details. Plan/profile sheets will be provided along with general notes and a summary of pay items.

12/9/2005

Bowyer-Singleton Associates, Inc.

Lake Emma Road

SUMMARY FEE SHEET

SEMINOLE COUNTY

Amendment 11

Project Manager: Kevin Knudsen

12/09/05

ACTIVITY	Project Manager		Sr. Engineer		Engineer		Engr. Technician		P.L.S.		Sr. Landscape Arch		Planner		TOTAL FEE	TOTAL M/H	Avg. Rate/Hr		
	M/H	Rate/Hr	M/H	Rate/Hr	M/H	Rate/Hr	M/H	Rate/Hr	M/H	Rate/Hr	M/H	Rate/Hr	M/H	Rate/Hr					
1 Right of Way Mapping	see attached																\$0	0	
2 Silver Lks Subdivision Wall	6	163.59	40	112.81	40	69.07	48	68.84							11,561	134	86.28		
3 Pond 5 R/w Revisions	2	163.59	4	112.81	12	69.07	8	68.84	6	115.43					2,851	32	89.09		
4 Ridge Point Cove Analysis	6	163.59	24	112.81	32	69.07	43	68.84	12	115.43					10,245	117	87.56		
5 Pond 7 Responses	4	163.59	14	112.81			4	68.84							2,509	22	114.05		
6 Seminole Co Lift Sta. Acces	8	163.59	32	112.81	45	69.07									8,027	85	94.44		
7 Signing & Marking Revisions	4	163.59	10	112.81	16	69.07									2,888	30	96.27		
8 Administration	4	163.59	12	112.81	16	69.07									3,113	32	97.28		
9A Signalization Plans Update	28	163.59	60	112.81	91	69.07									17,634	179	98.51		
9B Signal Plans - Technology P	8	163.59	32	112.81	56	69.07									8,787	96	91.53		
10 Irrigation Plans Stds Update	4	163.59									7	108.16	16	71.25	2,551	27	94.48		
11 Irrigation Main Plans	24	163.59	40	112.81	48	69.07	285	68.84							31,373	397	79.03		
TOTALS	98	16,032	268	30,233	356	24,589	388	26,710	18	2,078	7	757	16	1,140	\$101,539	1,151	88.22		

TOTAL CONTRACT FEE COMPUTATIONS

SUBCONSULTANTS - FIXED FEE:

Nodarse - Geotechnical	5,400
TOTAL (f)	5,400

Basic Activities (Salary Cost)

\$101,539

SUBTOTAL (Cost Elem.-Basic Fee)
 (d) ROW Survey and Office Support
 (e) Title Searches
 (f) Right of Way Mapping
 SUBTOTAL
 (f) Subconsultant
 Total Lump Sum Amount

101,539
 L.S. 11,637
 L.S. 4,480
 L.S. 19,155
 L.S. 136,811
 L.S. 5,400
\$ 142,211

HIGHWAY TASK LIST							
Lake Emma Road - Review, Update R/W Maps							
Seminole County				Bowyer-Singleton & Associates, Inc.			
6-Dec-05				John Cheney			
Activity: F. Field Survey							
Task	3 Man Day	4 Man Day	5 Man Day	Clerical Hrs	PLS Hrs	Sr. Tech Hrs	Remarks
Geodetic Baseline Control	0	0	0	0	0	0	
Alignment	0	0	0	0	0	0	
Reference Points	0	0	0	0	0	0	
Aerial Target Placement							
Bench Levels	0	0	0	0	0	0	
Topography	0	0	0	0	0	0	
Rdwy. X-Sections/Profiles	0	0	0	0	0	0	
Side Street Surveys	0	0	0	0	0	0	
Underground Utilities	0	0	0	0	0	0	
Drainage Survey	0	0	0	0	0	0	
Bridge Survey							
Outfall & Det/WRA Survey							
Jurisdictional Line Survey	0	0	0	0	0	0	
Stakeout for Borings	0	0	0	0	0	0	
Supplemental Surveys	0	0	0	0	0	0	
RIGHT-OF-WAY SURVEYS							
1. Section Line Ties	0	0	0	0	0	0	
2. Sub./Property Line Ties	8	0	0	0	16	24	Tie 4 New S/D
3. Maintained R/W Survey							
4. Building Ties				0	0	0	
5. Property Line Ties				0	0	0	
6. Jurisdictional Line				0	0	0	
7. R/W Monumentation				0	0	0	
8. Map and Plat Copies				0	0	0	
Totals	8	0	0	0	16	24	
Daily Rate	\$1,018						
Total Field Survey Fee (rounded)	\$8,144						\$8,144
Office Support	Hrs	Rate					
Clerical	0	\$49.09	0				
Registered Supervision	16	\$115.43	\$1,847				
Senior Tech Calculations	24	\$68.58	\$1,646				\$3,493
Total Field Survey & Office Support							\$11,637

Activity: G. Right-of-Way Maps		Subactivity: None				TOTAL	TECH	
Task	EST BASIS	NO. UNITS	HRS/ UNIT	NO. SHTS	HOURS	HOURS	REMARKS	
1. Land & R/W Lines Calculations	L.S.	0	0		0	0		
2. Control Survey Map	L.S.	N/A				0	N/A	
3. R/W Cover Sheet	SHEET	1	0.5	1	1	0.8	Review & Update	
4. R/W Key Map	SHEET	2	1	1	2	1.6	Review & Update	
5. R/W Detail Map	SHEET	30	2	30	60	48	Review & Update	
6. Table of Ownership	SHEET	2	2	1	4	3.2	Review & Update	
7. Legals	EACH	79	2		158	126.4	Review & Update	
8. Court Exhibit Preparation	EACH	N/A				0	N/A	
Subtotal				33	225	180		
9. Quality Control	L.S.	1	9		9		5% of CADD Subtotal	
10. Supervision	L.S.	1	5		5		3% of CADD Subtotal	
11. Field Reviews	EACH	0	0		0			
12. Progress Meetings	EACH	0	0		0			
Totals				33	239			
Title Searches	UNITS	COST						
New Searches	14	\$195					\$2,730	
Update Existing	50	\$35					\$1,750	
						Title Search Total	\$4,480	
Office Support	Hrs	Rate						
Registered Supervision	59	\$115.43	6,810	20%	20% Subtotal + QC, Supervision, Field Reviews & Me			
Senior Tech Calculations	180	\$68.58	12,344	80%	Mapping Total		\$19,155	
					Total Surveying & Mapping		\$35,272	

Manhour Estimate and Price Proposal
Lake Emma Road - Ammendment 11

Manhour Estimate				
Task 4 - Ridge Point Cove Analysis				
Activity	Units	Number Units	MH/ Unit	Total Manhours
Analysis & Design	LS	1	16	16
Plan & Profiles	Sheet	2	6	12
Cross Sections	EA	13	1	13
Driveway Profiles	EA	1	4	4
Wall Analysis & Design	LS	1	12	12
Retaining Wall Plan/Profile	Sheet	1	16	16
Retaining Wall Details	Sheet	1	12	12
Utility Plan/Profiles	Sheet	1	4	4
Utility Summary of Pay Items	Sheet	1	4	4
Right-of-Way Maps	Sheet	1	4	4
Title Searches				0
Legal Descriptions	EA	2	6	12
Table of Ownership	Sheet	1	2	2
Quality Assurance (5%)	LS	1	6	6
Total				117
Labor Distribution				
Project Manager				6
Sr Engineer				24
Senior Surveyor				12
Engineer				32
Engineering Technician				43
Total				117
Comments:				
Prepared by Kevin Knudsen				08-Dec-05

Manhour Estimate and Price Proposal
Lake Emma Road - Ammendment 11

Manhour Estimate				
Task 9A - Signalization Plans Updates				
Activity	Units	Number Units	MH/ Unit	Total Manhours
Key Sheet	Sheet	1	2	2
Tabulation of Quantities	Sheet	1	8	8
General Notes	Sheet	1	4	4
Signalization Plan	Sheet	3	24	72
Interconnect Plan	Sheet	4	6	24
Mast Arm Details	Sheet	1	2	2
Mast Arm Schedule	Sheet	1	8	8
Structural Details	Sheet	1	2	2
Struct. Pole & Foundation	Sheet	1	8	8
Structural Analysis	LS	4	10	40
Quality Assurance (5%)	LS	1	9	9
Total				179
Labor Distribution				
Project Manager				28
Senior Engineer				60
Engineer				91
Total				179
Comments:				
Prepared by Kevin Knudsen				08-Dec-05



Geotechnical, Environmental Consulting & Materials Engineering

October 25, 2005
Project No. 01-05-1198-101

Mr. Charles S. Carswell, P.E.
Bowyer-Singleton & Associates, Inc.
520 South Magnolia Avenue
Orlando, Florida 32801

**Proposal for Subsurface Exploration and
Geotechnical Engineering Evaluation
Proposed Mast Arm Signal Poles and Retaining Wall
Lake Emma Road and Technology Park Drive
Seminole County, Florida**

Dear Mr. Carswell:

This letter and the attached scope of services and fee estimate summarize Nodarse & Associates, Inc.'s (N&A) scope of work for the above-referenced project. The scope of services for this project was based on information supplied by Mr. Carswell.

We understand that this project consists of placement of a total of four (4) mast arm signal poles at the Lake Emma Road and Technology Park Drive intersection in Seminole County, Florida. Also, it is our understanding that a retaining wall (about 5 to 6 feet in height and about 100 feet long) is proposed at the intersection.

The proposed scope of services is based on the supplied information and our experience in the area with sites and projects similar to this one. Our exploration is planned to include the following:

- Mobilize mudbug-mounted drilling equipment and crew to the site.
- Perform one (1) Standard Penetration Test (SPT) boring to an average depth of 30 feet at each mast arm signal pole location (4).
- Perform two (2) SPT borings to average depths of 20 feet along the retaining wall alignment.

B U I L D O N O U R E X P E R I E N C E

1675 LEE ROAD • WINTER PARK, FL 32789 • 407.740.6110 • FAX: 407.740.6112 • www.nodarse.com
JACKSONVILLE • MIAMI • ORMOND BEACH • POLK COUNTY • TAMPA • WEST PALM BEACH • WINTER PARK

Bowyer-Singleton & Associates, Inc.

Nodarse & Associates, Inc. Project No. 01-05-1198-101

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- Perform visual classification and required laboratory testing of the soil samples obtained from the borings. Laboratory testing may include grain size analysis, moisture content tests and/or Atterberg Limits analysis to verify visual classification of soil types.

In performing this field work, we will follow the appropriate 600 series safety index from the Florida Department of Transportation (FDOT) Roadway and Traffic Design Standards.

Engineering services will include coordination of all field and laboratory testing as well as geotechnical engineering recommendations to assist in design/depth of the signal pole foundations; and to assist in the analysis of the external stability of the retaining wall. After completion of the field phase of the project, a report will be prepared.

We estimate completion of the field work within ten (10) to twenty (20) working days of notice to proceed. Laboratory testing should be completed and a report should be prepared approximately two (2) weeks after the fieldwork is completed.

In accordance with the proposed scope of services and unit prices, we estimate the total cost of the project to be **\$5,400.00**. N&A's scope of services and fee estimate for this project are attached.

Estimates may vary and additional items may be used to meet the project requirements. Prices will adhere to the fee schedule and remain under the authorized upset limit. Also, we will not exceed this figure without authorization from you.

To authorize us to proceed with this project, please execute and return to us a copy of the attached Proposal Acceptance Sheet. Authorization should be indicated by the person or firm responsible for payment of our invoice. Please note the attached Acceptance Sheet forms a part of this proposal and that our terms are "Net 30 Days."

Bowyer-Singleton & Associates, Inc.
Nodarse & Associates, Inc. Project No. 01-05-1198-101
Page 3

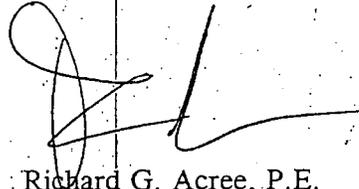
We look forward to working with you on this project. If you should have any questions concerning the contents of this proposal, or if we can be of further services to you, please do not hesitate to contact us.

Sincerely,

NODARSE & ASSOCIATES, INC.



Elias N. Jammal, P.E.
Professional Geotechnical Engineer



Richard G. Acree, P.E.
Geotechnical Department Manager, VP

Attachment: Scope of Services and Fee Estimate
Agreement

SCOPE OF SERVICES AND FEE ESTIMATE
 PROPOSED MAST ARM SIGNAL POLES AND RETAINING WALL
 LAKE EMMA ROAD and TECHNOLOGY PARK DRIVE
 SEMINOLE COUNTY, FLORIDA
 N&A PROJECT NO. 01-05-1198-101
 OCTOBER 25, 2005

DESCRIPTION OF WORK	QTY.	RATE	UNIT
I. FIELD EXPLORATION			
A. Mobilization of Crew and Mudbug Mounted Equipment	1	\$350.00	each.
B. Standard Penetration Test (SPT) Borings -0 to 50 feet (4 @ 30 feet) (2@ 20 feet).	160	\$10.00	per lf.
C. Grout Seal Boreholes -0 to 50 feet (4 @ 30 feet) (2 @ 20 feet)	160	\$3.00	per l.f.
D. Site Reconnaissance/Utility Coordination -Senior Engineering Technician	8	\$45.00	per hour
Subtotal			
II. LABORATORY TESTING			
A. Moisture Content Test	3	\$10.00	per test
B. Grain Size (-200)	6	\$40.00	per test
C. Atterberg Limits	3	\$80.00	per test
Subtotal			
III. ENGINEERING AND TECHNICAL SERVICES			
A. Senior Project Engineer	4	\$110.00	per hour
B. Project Engineer	16	\$75.00	per hour
C. CADD Operator	6	\$50.00	per hour
D. Word Processing	4	\$40.00	per hour
Subtotal			
TOTAL			