

PROFESSIONAL SERVICES

- 25. Approve ranking, authorize negotiations and award PS-5187-05/PWM Master Agreement for the Widening of SR 434 from I-4 to Rangeline Rd to Bowyer-Singleton & Associates, Inc., Orlando.**

PS-5187-05/PWM will provide engineering services for the widening of SR 434 from I-4 to Rangeline Road. This project was publicly advertised and the County received seven submittals (listed alphabetically):

- Avcon, Inc., Orlando;
- Bowyer-Singleton & Associates, Inc., Orlando;
- CH2M Hill, Inc., Orlando;
- Earth Tech Consulting, Inc., Orlando;
- HDR Engineering Inc., Orlando;
- Keith & Schnars, P.A., Altamonte Springs;
- WBQ Design & Engineering, Inc., Orlando.

The Evaluation Committee, which consisted of Brett Blackadar, P.E., Principal Engineer; Don Fisher, Deputy County Manager; Gary Johnson, PE., Director of Public Works; Antoine Khoury, P.E., Principal Engineer; Jerry McCollum, P.E., County Engineer; Charles Wetzel, Assistant County Traffic Engineer and Co-Co Wu, P.E., Principal Engineer; evaluated the submittals and short-listed three firms based on the following criteria:

- Approach to the Project / Understanding of the Project;
- Qualifications of the Firm / Project Team Experience;
- Similar Project Experience;
- Use of Innovative Techniques or Solutions;
- Location of the Firm.

The Evaluation Committee short-listed and interviewed the following three firms (listed alphabetically):

- Bowyer-Singleton & Associates, Inc., Orlando;
- Earth Tech Consulting, Inc., Orlando;
- Keith & Schnars, P.A., Altamonte Springs.

The short-listed firms were evaluated based on the following criteria:

- Approach to the Project;
- Innovative Techniques;
- Project Team / Similar Experience.

The Evaluation Committee recommends that the Board approve the ranking below and authorize staff to negotiate with the top ranked firm in accordance with F.S. 287.055, the Consultants Competitive Negotiation Act (CCNA):

1. Bowyer-Singleton & Associates, Inc., Orlando;
2. Keith and Schnars, P.A., Altamonte Springs;
3. Earth Tech Consulting, Inc., Orlando.

Authorization for performance of services by the Consultant under this agreement shall be in the form of written Work Orders issued and executed by the County and signed by the Consultant. The work and dollar amount for each Work Order will be within the constraints of the Board approved project budget and negotiated on an as-needed basis. The term of the contract for this project shall run for eight (8) years and at the sole option of the County may be renewed for two (2) successive periods of one (1) year each. The estimated contract value is \$1,500,000.00.

Public Works / Engineering Division and Fiscal Services / Purchasing and Contracts Division recommend that the Board approve the ranking, authorize staff to negotiate and authorize the Chairman to execute a Master Agreement as prepared by the County Attorney's Office.

**B.C.C. - SEMINOLE COUNTY, FL
PS TABULATION SHEET**

ALL SUBMITTALS ACCEPTED BY SEMINOLE COUNTY ARE SUBJECT TO THE COUNTY'S TERMS AND CONDITIONS AND ANY AND ALL ADDITIONAL TERMS AND CONDITIONS SUBMITTED BY THE PROPOSERS ARE REJECTED AND SHALL HAVE NO FORCE AND EFFECT. PS DOCUMENTS FROM THE PROPOSERS LISTED HEREIN ARE THE ONLY SUBMITTALS RECEIVED TIMELY AS OF THE ABOVE OPENING DATE AND TIME. ALL OTHER PS DOCUMENTS SUBMITTED IN RESPONSE TO THIS SOLICITATION, IF ANY, ARE HEREBY REJECTED AS LATE.

PS NUMBER: PS-5187-05/PWM
 PS TITLE : Master Agreement for Professional Services for SR 434
 from I-4 to Rangeline Road
 DATE: June 1, 2005 TIME: 2:00 P.M.

RESPONSE -1-	RESPONSE -2-	RESPONSE -3-	RESPONSE -4-	RESPONSE -5-
Avcon, Inc. 5555 E. Michigan St., Ste 200 Orlando, FL 32822 Rick Baldocchi, P.E. 407-599-1122 – Phone 407-599-1133– Fax	Bowyer-Singleton & Associates, Inc. 520 South Magnolia Avenue Orlando, FL 32801 Kevin E. Knudsen, P.E. 407-843-5120 – Phone 407-649-8664– Fax	CH2M Hill, Inc. 225 E. Robinson, Suite 505 Orlando, FL 32801 Mark S. Callahan 407-423-0030 – Phone 407-839-5901 – Fax	Earth Tech Consulting, Inc. 30 S. Keller Rd., Ste. 500 Orlando, FL 32810 David W. Gorden 407-660-1719 – Phone 407-660-0250– Fax	HDR Engineering Inc. 315 East Robinson St, Ste. 400 Orlando, FL 32801 Steven A. Keyes, P.E.. 407-420-4200 – Phone 407-420-4242– Fax
RESPONSE -6-	RESPONSE -7-			
Keith and Schnars, P.A. 385 Center Pointe Circle, Suite 385 Altamonte Springs, FL 32701 Donald P. Graham, P.E. 407-834-1616 – Phone 407-834-8530 – Fax	WBQ Design & Engineering, Inc. 201 N. Magnolia Avenue Orlando, FL 32801 Derek Burke 407-839-4300 – Phone 407-839-1621 – Fax			

Tabulated by Diane Reed – Posted 6/2/2005 (1:30 P.M.)

Short-listed: Evaluation Committee Meeting: 6/22/2005 at 11:00am, located at 520 West Lake Mary Blvd., Lake Jesup Conference Room, Sanford, Florida

Presentations: July 19, 2005, 8:30 am, at 520 W. Lake Mary Blvd., Lake Jesup Conference Room, Sanford, Florida. Short-listed firms scheduled to present:

Bowyer-Singleton & Associates, Inc. 8:30 am;
 Earth Tech Consulting, Inc. 9:10 am;
 Keith & Schnars, P.A. 9:50 am.

BCC Date: August 9, 2005—TBD

PRESENTATION RANKINGS
PS-5187-05/PWM - MASTER AGREEMENT FOR SR 434 FROM I-4 TO RANGELINE ROAD

	A. Khoury	G. Johnson	J. McCollum	B. Blackadar	C. Wu	D. Fisher	C. Wetzel	TOTAL POINTS	RANKING
BOWYER-SINGLETON & ASSOCIATES, INC.	1	1	1	1	1	1	1	7	1
EARTH TECH CONSULTING, INC.	3	3	3	3	3	2	3	20	3
KEITH AND SCHNARS, P.A.	2	2	2	2	2	3	2	15	2

The Committee approves the above ranking.

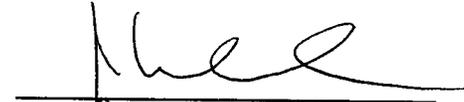

 Antoine Khoury


 Brett Blackadar


 Charles Wetzel


 Gary Johnson


 Co-Co Wu


 Jerry McCollum


 Don Fisher

PS-5187-05/PWM- Professional Services for SR 434 from I-4 to Rangeline Road

SUBMITTAL COMPANY NAME: BSA

QUALIFICATION COMMITTEE MEMBER: J McCollum

INSTRUCTIONS: Score each criterion from 1 to 100 based on the following general guidelines:

- 90 - 100 Outstanding, out-of-the-box, Innovative, Cost/Time Savings
- 80 - 89 Excellent, Very Good, Solid in all respects.
- 70 - 79 Good, No major weaknesses, Fully Acceptable as is
- 60 - 69 Marginal, Weak, Workable but needs clarifications
- Below 60 Unacceptable, Needs major help to be acceptable

Describe strengths, weaknesses and deficiencies to support your assessment.

Criteria: Approach to the Project (60%) Excellent all issues detailed

Public Involvement Very good
 Do conceptual design review (to validate PDE) - Meet 2 Westbound pavement (All Row on South) - Do percent review upfront. maybe reduce median to 19.5'.
 MTO issues (especially Res. night issues) maintain north side sidewalk for MTO
 Drainage - Contact SJWMB / FOOT
 Try to use existing pipes. Pavement spread ok for inlet. Sink hole
 Signals
 Noise wall issues - utility issues

Score 85
(100-0)

51.0

Criteria: Innovative Techniques (20%)

Conceptual review of PDE document
 Box out Rangeline / SR 434
 Phased MTO uses westbound pavement
 Use most of existing drainage system
 Static competitive
 black base
 15 mos. schedule (Very good) +

Score 82
(100-0)

16.4

Criteria: Project Team/ Similar Experience (20%)

Very good team
 Have done several
 Sim. Co. jobs

16.4

① Rangeline Improvements? - City of Laguna A. -
 Total Score ② 19.5 median
 ③ Wetland Protection Bill - Basin

Score 82
(100-0)
83.8

PS-5187-05/PWM- Professional Services for SR 434 from I-4 to Rangeline Road

SUBMITTAL COMPANY NAME: Keith / Schmitt

QUALIFICATION COMMITTEE MEMBER: J. McCollum

INSTRUCTIONS: Score each criterion from 1 to 100 based on the following general guidelines:

- 90 - 100 Outstanding, out-of-the-box, Innovative, Cost/Time Savings
- 80 - 89 Excellent, Very Good, Solid in all respects.
- 70 - 79 Good, No major weaknesses, Fully Acceptable as is
- 60 - 69 Marginal, Weak, Workable but needs clarifications
- Below 60 Unacceptable, Needs major help to be acceptable

Describe strengths, weaknesses and deficiencies to support your assessment.

Criteria: Approach to the Project (60%) Very detailed on most aspects

Very good on traffic. Border width (8' maybe)

ROW off south. Use westbound lanes

Save inlets / manholes for drainage

Avoid wetlands via retainer walls / sheet piles

S Phase MOT. Very good on drainage.

Exfiltration: covered - cannot use I & P

Street lighting: 10 utility owners (Very good)

Very good (+)

Public Involvement Level 3

49.2

Score 82
(100-0)

Criteria: Innovative Techniques (20%)

Use existing trunklines drainage

Keep westbound lanes thru milling / resurfacing

Very good

16.0

Score 80
(100-0)

Criteria: Project Team/ Similar Experience (20%)

Very good team

Members have done work for Co. in past

S. Lohle 24 mos

16.0

Score 80
(100-0)

- ① Ltr @ Rangeline (longway)
- ② FAT Study
- ③ S. Lohle Clubhouse
- ④ Night work Drainage
- ⑤ Level III - P.I.

81.2

Total Score

PS-5187-05/PWM- Professional Services for SR 434 from I-4 to Rangeline Road

SUBMITTAL COMPANY NAME: Earth Tech

QUALIFICATION COMMITTEE MEMBER: J McCollum

INSTRUCTIONS: Score each criterion from 1 to 100 based on the following general guidelines:

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Describe strengths, weaknesses and deficiencies to support your assessment.

Criteria: Approach to the Project (60%)

Row - All to South - Use westbound pavement
Reuse truck lane for drainage - Carry GL
thru EB to Lawrence. S-10 hole issue,
at container, pond at I-4 can contain
3" - Expand water pond, Detail traffic
Covered work Bill issue,
MOT plan - detailed Public Involvement
Very good on drainage / traffic
Design elements little general

Score 80
(100-0)

48.0

Criteria: Innovative Techniques (20%)

Use westbound lanes / maintain
existing

Good (++)

Score 78
(100-0)

15.6

Criteria: Project Team/ Similar Experience (20%)

Lloyd Gunn - New PM for project
(D: d ELMB)

Very good team

29 month schedule

① FOOT coord. with I-4
work Bill - OK covered
Polin Spangl - Detail letter
Rangeline

Score 80
(100-0)

16.0

Total Score

79.6

PS-5187-05/PWM- Professional Services for SR 434 from I-4 to Rangeline Road

SUBMITTAL COMPANY NAME: Keith & Schnars

QUALIFICATION COMMITTEE MEMBER: Charlie Wetzel

INSTRUCTIONS: Score each criterion from 1 to 100 based on the following general guidelines:

- 90 - 100 Outstanding, out-of-the-box, Innovative, Cost/Time Savings
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Describe strengths, weaknesses and deficiencies to support your assessment.

Criteria: Approach to the Project (60%)

Synchro analysis - double left side ramp lane recommended
holding no. edge of roadway - less impact parcel impacts, const.
impacts,
5 phase MOT
standard utility coord., Public Involvement
const. ISM

Score 82 49.2
(100-0)

Criteria: Innovative Techniques (20%)

Salvage WB pavement section, hold no. ROW line - save MOT, const. costs
retaining walls @ wetlands, bank to reduce impacts
video inspection of existing drainage to determine re-use
LAMP survey
re-evaluate PER
design 24 months

Score 82 16.4
(100-0)

Criteria: Project Team/ Similar Experience (20%)

Don Graham, PM
tusculum, airport, maint. - Seminole projects
DS work

Score 80 16
(100-0)

Total Score

81.6

PS-5187-05/PWM- Professional Services for SR 434 from I-4 to Rangeline Road

SUBMITTAL COMPANY NAME: Earth Tech

QUALIFICATION COMMITTEE MEMBER: Charlie Wetzel

INSTRUCTIONS: Score each criterion from 1 to 100 based on the following general guidelines:

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Describe strengths, weaknesses and deficiencies to support your assessment.

Criteria: Approach to the Project (60%)

widening on south side of roadway
utility coordination
sinkhole grout penetration
Sandhill Cranes
detailed intersection analysis of 4 signalized intersections - lane lengths
4 MOT phases

\$7.7M estimate , 24 month design

Score 82
(100-0)

49.2

Criteria: Innovative Techniques (20%)

re-use northern portion of pavement structure , save ≈ \$1M
pre-project synchro analysis
LAMP survey

Score 80
(100-0)

16

Criteria: Project Team/ Similar Experience (20%)

Lloyd Kurr, PM replace Lynn Kendrick
Kittelson already on 434 west side
Burchheit survey

E.LWS project

Score 80
(100-0)

16

Total Score

81.2

PS-5187-05/PWM- Professional Services for SR 434 from I-4 to Rangeline Road

SUBMITTAL COMPANY NAME: BSA

QUALIFICATION COMMITTEE MEMBER: Charlie Wetzel

INSTRUCTIONS: Score each criterion from 1 to 100 based on the following general guidelines:

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Describe strengths, weaknesses and deficiencies to support your assessment.

Criteria: Approach to the Project (60%)

conceptual design review (mini-PDFE)
hold north side of roadway (serve pavement, SW, etc.)
parcel review / cost review
typical section alternatives
gratech - sink hole work during const. - GP Radar
15 month schedule
FDOT sign? no cost estimate

Score 85 51.0
(100-0)

Criteria: Innovative Techniques (20%)

low barrier walls during MOT
hold on side pavement, 2 phase MOT
transition @ Rangeline
static compaction

Score 85 17
(100-0)

Criteria: Project Team/ Similar Experience (20%)

dan chuster, MOT specialist
3 subs - geo, GMB traffic analysis, appraisal
5 projects in Seminole, 11 similar projects

Score 85 17
(100-0)

Total Score

85.0

PS-5187-05/PWM- Professional Services for SR 434 from I-4 to Rangeline Road

SUBMITTAL COMPANY NAME: BSA

QUALIFICATION COMMITTEE MEMBER: Gary Johnson

INSTRUCTIONS: Score each criterion from 1 to 100 based on the following general guidelines:

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Describe strengths, weaknesses and deficiencies to support your assessment.

Criteria: Approach to the Project (60%)

Conceptual design review during survey (update PDE)
Good understanding of R/W issues, impacts
MOT, work staging well presented
Access mgmt. considerations
Drainage - FDOT, SJRWMD consulted, good detail on investigation, permitting 54
Geotech - sinkhole issues (No Xfiltration)

Score 90
(100-0)

Criteria: Innovative Techniques (20%)

Conceptual design review - used to minimize acquisition costs
- typical section alternatives
RA/RC uses peer review - company policy
Static compaction
R/W appraisal services 16

Score 80
(100-0)

Criteria: Project Team/ Similar Experience (20%)

D5 Survey experience (Location Design)
Certified MOT constructor - lane closure analysis 20
- night work zones
sc - 5 projects
others - Orlando, OC, Lake County, DOT

Score 100
(100-0)

Total Score

90

PS-5187-05/PWM- Professional Services for SR 434 from I-4 to Rangeline Road

SUBMITTAL COMPANY NAME: Earth Tech

QUALIFICATION COMMITTEE MEMBER: Gary Johnson

INSTRUCTIONS: Score each criterion from 1 to 100 based on the following general guidelines:

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- 80 - 89 Excellent, Very Good, Solid in all respects.
- 70 - 79 Good, No major weaknesses, Fully Acceptable as is
- 60 - 69 Marginal, Weak, Workable but needs clarifications
- Below 60 Unacceptable, Needs major help to be acceptable

Describe strengths, weaknesses and deficiencies to support your assessment.

Criteria: Approach to the Project (60%)

Key issues - R/W impacts, utilities Good graphics/photos
- good details on utility issues
- landscaping through H/Halback
Geotech - sinkhole @ Harbour Isle Way (Nodora)
Drainage - Wetia issues, Island Lake @ closed basin 48
Traffic - Four intersections analyzed w/new counts
- good integration w/access mgt. plan
Community Awareness: Score 80
(100-0)

Criteria: Innovative Techniques (20%)

Reuse WR put. & drainage - Stan Mann contacted
Survey - LAMP (Low altitude mapping photography) 16
- Lochrane (FDOT) surveys & mapping
Alternative typical sections
Savings = \$700K (did estimate - PER was full depth reconstruct)
Score 80
(100-0)

Criteria: Project Team/ Similar Experience (20%)

PM from ELMB (same team)
Traffic by Kittleron
Multiple FDOT projects (DS) 18
Freeman/Horlander new to team
Score 90
(100-0)

Total Score

82

PS-5187-05/PWM- Professional Services for SR 434 from I-4 to Rangeline Road

SUBMITTAL COMPANY NAME: Keith & Schnars

QUALIFICATION COMMITTEE MEMBER: Gary Johnson

INSTRUCTIONS: Score each criterion from 1 to 100 based on the following general guidelines:

- 90 - 100 Outstanding, out-of-the-box, Innovative, Cost/Time Savings
- 80 - 89 Excellent, Very Good, Solid in all respects.
- 70 - 79 Good, No major weaknesses, Fully Acceptable as is
- 60 - 69 Marginal, Weak, Workable but needs clarifications
- Below 60 Unacceptable, Needs major help to be acceptable

Describe strengths, weaknesses and deficiencies to support your assessment.

Criteria: Approach to the Project (60%)

Traffic - 2026 count 65K, lane drops from inside through lanes (WB+EB)
Access mgmt - Recognized study model screens
FDOT design issue - border req'mts, all design issues identified (vertical & horizontal)
Harbour Island Way - subsidence issue
MOT - 2 lanes maintained in each direction
Drainage - Soldiers Creek Basin? Capacity of 4 pond limited
- Wekiva 3" req't not Good permitting discussion
- FDEP TMDL, issues identified/mitigation options
Landscaping - tree replacements
Utilities - DOT req'mts apply, requires agreements

Score 80 48
(100-0)

Criteria: Innovative Techniques (20%)

Retaining wall along wetlands, other properties
LAMP supplements conventional survey
Vacuum excavation verification of utilities
Consultant for cost to cure issues
Exfiltration? Const. cost \$15M
Level III public involvement

Score 90
(100-0)

Criteria: Project Team/ Similar Experience (20%)

SC - 3 projects
DS - multiple projects, multiple team members
Multiple sub-consultants

Score 90
(100-0)

Total Score

84

PS-5187-05/PWM- Professional Services for SR 434 from I-4 to Rangeline Road

SUBMITTAL COMPANY NAME: BOYER SINGLETON

QUALIFICATION COMMITTEE MEMBER: ANTOINE KHOURY

INSTRUCTIONS: Score each criterion from 1 to 100 based on the following general guidelines:

- 90 - 100 Outstanding, out-of-the-box, Innovative, Cost/Time Savings
- 80 - 89 Excellent, Very Good, Solid in all respects.
- 70 - 79 Good, No major weaknesses, Fully Acceptable as is
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- Below 60 Unacceptable, Needs major help to be acceptable

Describe strengths, weaknesses and deficiencies to support your assessment.

Criteria: Approach to the Project (60%)

Include Pedestrian & Bicycle Facilities, update the PDPE study. Salvage the WB lanes & sewer storm mains, parcel by parcel Review. Cross Drainage Review. Identified Issues with the existing system. STINK HOLE & LIMIT TRENCH. excellent RAMP

Score 88 52.8
(100-0)

Criteria: Innovative Techniques (20%)

SAVE WB pavement & SW & STORM SEWER Parcel by parcel Approach. Minimize ROW IMPACTS. TRANSITION @ Ramp line. Access Management Review. USE OF existing Main. Repair & GROUT WHEEL CONSTRUCTION, Excellent public involvement plan. Schedule 15 MONTHS

Score 90 18
(100-0)

Criteria: Project Team/ Similar Experience (20%)

Excellent similar experience
" County "
MAJORITY WORK IN HOUSE

Score 88 17.6
(100-0)

Total Score

88.4

PS-5187-05/PWM- Professional Services for SR 434 from I-4 to Rangeline Road

SUBMITTAL COMPANY NAME: EARTHTECH

QUALIFICATION COMMITTEE MEMBER: ANTOINE KHOURY

INSTRUCTIONS: Score each criterion from 1 to 100 based on the following general guidelines:

- 90 – 100 Outstanding, out-of-the-box, Innovative, Cost/Time Savings
- 80 – 89 Excellent, Very Good, Solid in all respects.
- 70 – 79 Good, No major weaknesses, Fully Acceptable as is
- 60 – 69 Marginal, Weak, Workable but needs clarifications
- Below 60 Unacceptable, Needs major help to be acceptable

Describe strengths, weaknesses and deficiencies to support your assessment.

Criteria: Approach to the Project (60%)

Good INTRO, Reuse of Existing pavement. Reuse of gutter line. NO Repavement of POZE. CRANE in Island lane. INTERCONNECT

Score 82 49.2
(100-0)

Criteria: Innovative Techniques (20%)

USE of Existing pavement
USE of Stormwater Lines
Priority to Signalized INTERSECTION
Temporary Mainline

Score 84 16.8
(100-0)

Criteria: Project Team/ Similar Experience (20%)

USE Good Subs
HEBERT Hallmark Landscaping
SURVEY TEAM
Public Meeting

Score 84 16.8
(100-0)

Total Score

82.8

PS-5187-05/PWM- Professional Services for SR 434 from I-4 to Rangeline Road

SUBMITTAL COMPANY NAME: KIETHA SCHAURES

QUALIFICATION COMMITTEE MEMBER: ANTOINE KHOURY

INSTRUCTIONS: Score each criterion from 1 to 100 based on the following general guidelines:

- 90 - 100 Outstanding, out-of-the-box, Innovative, Cost/Time Savings
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- 70 - 79 Good, No major weaknesses, Fully Acceptable as is
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Describe strengths, weaknesses and deficiencies to support your assessment.

Criteria: Approach to the Project (60%)

Too Much Emphasis on TRAFFIC HISTORY REHASHING PDFs
Design Criteria as presented in PDFs
Good NOT PHASING
Good in Depth look for Storm Sewer.

Score 87 52.2
(100-0)

Criteria: Innovative Techniques (20%)

Reuse of existing pavement, Rebuild SW
utility & other Coordination MASTER AGREEMENTS
Use of infiltration systems
RA/RC
TWO YEARS
PDFs Revolution

Score 88 17.6
(100-0)

Criteria: Project Team/ Similar Experience (20%)

Good Experience P

Will you be using existing Trunk line
Exfiltration geotech
Not Use ponds

Score 86 17.2
(100-0)

Total Score

87.0

PS-5187-05/PWM- Professional Services for SR 434 from I-4 to Rangeline Road

SUBMITTAL COMPANY NAME: Bowyer - Singleton

QUALIFICATION COMMITTEE MEMBER: Brett Blackadar

INSTRUCTIONS: Score each criterion from 1 to 100 based on the following general guidelines:

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- 70 - 79 Good, No major weaknesses, Fully Acceptable as is
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- Below 60 Unacceptable, Needs major help to be acceptable

Describe strengths, weaknesses and deficiencies to support your assessment.

Criteria: Approach to the Project (60%)

Good analysis of possible site impacts along corridor. Good end of project discussion @ Rangeline. Good line closure analysis. Propose to save existing pavement on north side. Excellent work zone traffic control analysis. Good drainage research on existing drainage conditions. They should I-4 Master plan configuration on aerial graphic.

54

Score 90
(100-0)

Criteria: Innovative Techniques (20%)

Propose conceptual design remain to update to new standards. Propose saving Sleepy Hollow sidewalk + wall on the north side. Propose using approach up front to avoid ROW costs. Propose using 19.5' median if saves ROW costs. Propose limiting exfiltration due to sinkhole potential. Propose to do grout injection to stabilize sinkhole activity. Propose static rollers, no vibrating. Good analysis of Rangeline transition.
→ propose 15 month schedule.

18

Score 90
(100-0)

Criteria: Project Team/ Similar Experience (20%)

→ in-house survey w/ 80 crews w/ lots of FDOT experience
Have done several similar Seminole County + FDOT projects

Score 95
(100-0)

19

Total Score

91

PS-5187-05/PWM- Professional Services for SR 434 from I-4 to Rangeline Road

SUBMITTAL COMPANY NAME: Earthtech

QUALIFICATION COMMITTEE MEMBER: Brett Blackadar

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 - 70 - 79 Good, No major weaknesses, Fully Acceptable as is
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Describe strengths, weaknesses and deficiencies to support your assessment.

Criteria: Approach to the Project (60%)

Very nice + detailed aerial. Good roadway analysis. Good drainage discussion. Good assessment plan. Good discussion about VMS sign. Very good traffic analysis. Good MOT analysis. Good Sunny/CAMP discussion. Propose to save \$900,000 to use existing pavement + trunk line. Propose 34 month schedule, which includes R/W maps. Very good R/W mapping project.

51

Score 85
(100-0)

Criteria: Innovative Techniques (20%)

Propose to use westbound pavement in new section. Propose to carry 6 lanes thru Rangeline intersection. Good subgrade discussion/filling w/ gravel. Conducted May 2005 TMS before school was out. Did a Synchro analysis. Very good traffic operations analysis. Already met w/ Debbie Mitt @ FDOT. Already met w/ businesses along corridor.

17

Score 85
(100-0)

Criteria: Project Team/ Similar Experience (20%)

Same project team as in the East Lake Mary Blvd project. Also the same team on S.R. 50 did that project

18

Score 90
(100-0)

Total Score

86

PS-5187-05/PWM- Professional Services for SR 434 from I-4 to Rangeline Road

SUBMITTAL COMPANY NAME: Keith + Schnars

QUALIFICATION COMMITTEE MEMBER: Brett Blackadar

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 - 70 - 79 Good, No major weaknesses, Fully Acceptable as is
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 - Below 60 Unacceptable, Needs major help to be acceptable

Describe strengths, weaknesses and deficiencies to support your assessment.

Criteria: Approach to the Project (60%)

Show I-4 Master plan on aerial. They did mention T&E Access Management study. Good traffic operations analysis @ Rangeline. Good vegetation analysis. Good des. in analysis. Good MOT discussion. Good drainage analysis, especially at pond next to I-4. Good permitting discussion. Good wetland analysis. Very good utility discussion/discussion on master agreement. Detailed QA/QC plan. Schedule = 24 months.

54

Score 90
(100-0)

Criteria: Innovative Techniques (20%)

Did a CIPSSM analysis for presentation. Propose to hold north RAW line. Propose retaining wall against wetland to minimize impacts and to reduce RPT impacts. Good site/land permitting discussion. Propose video inspection of existing pipes. Propose LAMP for surveying. Use PD+E team members for public involvement phase. Propose appraiser to evaluate RAW. Propose PD+E re-evaluation for ponds, sound walls + access management. Propose a higher level of public involvement (level 3).

19

Score 95
(100-0)

Criteria: Project Team/ Similar Experience (20%)

Project Manager has done several Seminole County projects. He is very knowledgeable about project. Propose Southeastern for survey and Jones County for Mapping. John Murphy from GAI is proposed for utility coordination who is very experienced w/ DOT.

16

Score 80
(100-0)

Total Score

89

PS-5187-05/PWM- Professional Services for SR 434 from I-4 to Rangeline Road

SUBMITTAL COMPANY NAME: Gowat-Singleton & Assoc.

QUALIFICATION COMMITTEE MEMBER: Dan Fisher

INSTRUCTIONS: Score each criterion from 1 to 100 based on the following general guidelines:

- 90 - 100 Outstanding, out-of-the-box, Innovative, Cost/Time Savings
- 80 - 89 Excellent, Very Good, Solid in all respects.
- 70 - 79 Good, No major weaknesses, Fully Acceptable as is
- 60 - 69 Marginal, Weak, Workable but needs clarifications
- Below 60 Unacceptable, Needs major help to be acceptable

Describe strengths, weaknesses and deficiencies to support your assessment.

Criteria: Approach to the Project (60%)

Proposed a conceptual design review - update POB periodically - Good idea (bring to today's standards). Leave existing sidewalk on north to save impacts to steep hillside / save pavement / save some stormwater infrastructure. Evaluate individual businesses to save money in impacted and damages - gave specific examples. Presented alternate sections to save money. Phased construction with major work happening during the day. Do majority on S side as PHI. Pedestrian safety by leaving sidewalk - Also keep ADA during construction. Discussed drainage with other agencies. Discussed key issues with stormwater. Identified sinkhole potential. Indicated the project would be a great opportunity to finish (100-0)

Criteria: Innovative Techniques (20%)
Presented innovative techniques - conceptual design review, static compaction, plastic base

Score 86 17.2
(100-0)

Criteria: Project Team/ Similar Experience (20%)

Survey stated they former DOT employees - they stated they understand what DOT wants. Dan Castle - FDOT and FHWA certified. Presentation team appears very qualified to successfully complete the project - 5 projects completed in the county (some project manager also: CIS, Dodd, Lake Summit, Tuskawilla

Score 89 17.8
(100-0)

Total Score

87.8

PS-5187-05/PWM- Professional Services for SR 434 from I-4 to Rangeline Road

SUBMITTAL COMPANY NAME: Earth Tech

QUALIFICATION COMMITTEE MEMBER: Don Fisher

INSTRUCTIONS: Score each criterion from 1 to 100 based on the following general guidelines:

- 90 - 100 Outstanding, out-of-the-box, Innovative, Cost/Time Savings
- 80 - 89 Excellent, Very Good, Solid in all respects.
- 70 - 79 Good, No major weaknesses, Fully Acceptable as is
- 60 - 69 Marginal, Weak, Workable but needs clarifications
- Below 60 Unacceptable, Needs major help to be acceptable

Describe strengths, weaknesses and deficiencies to support your assessment.

Criteria: Approach to the Project (60%)

Scored that once they get past I-4, they would shift the road to the S. Use existing pavement, mill it, and resurface saving \$500k. Pretty good understanding of intersection, but not much discussion of parcel impacts. Discussed landscaping and recognized Longwood's commitment to landscaping. Spoke w/ DOT, recognize a need to fill/grout sinkhole. Use as much existing drainage system as possible. Understood that there may be a need for a management permit for South Hill drainage. Used SYNCHRO for traffic analysis and design. Discussed evaluating median openings based on use from adjacent parcels. Good detail.

Score 81 48.6

Criteria: Innovative Techniques (20%)

Used SYNCHRO for traffic analysis/intersection design. Proposed they could save \$500k using alternative options (Alternative typical section and utilize existing drainage trunk).

16.2 Score 81 (100-0)

discussion of traffic control plan. Use CAMD Act to keep survey crews off of the road. Community awareness recognized. Did not speak with Longwood about RANGELINE.

Criteria: Project Team/ Similar Experience (20%)

PROJECT MANAGER GOOD - Similar projects E. Lake Mary Blvd, SR 50 widening, SR 426 widening. Good experience in District 5. PROJECT MANAGER AND PROJECT TEAM APPEAR CAPABLE OF COMPLETING THE JOB. Good team experience. Indicated they have tremendous capacity to get this job done.

16.0 Score 80 (100-0)

Total Score

80.8

PS-5187-05/PWM- Professional Services for SR 434 from I-4 to Rangeline Road

SUBMITTAL COMPANY NAME: Keith Schwars

QUALIFICATION COMMITTEE MEMBER: Don Fisher

- INSTRUCTIONS: Score each criterion from 1 to 100 based on the following general guidelines:
- 90 - 100 Outstanding, out-of-the-box, Innovative, Cost/Time Savings
 - 80 - 89 Excellent, Very Good, Solid in all respects.
 - 70 - 79 Good, No major weaknesses, Fully Acceptable as is
 - 60 - 69 Marginal, Weak, Workable but needs clarifications
 - Below 60 Unacceptable, Needs major help to be acceptable

Describe strengths, weaknesses and deficiencies to support your assessment.

Criteria: Approach to the Project (60%)

Understood future traffic conditions and how they
plays into design, such as the I-4 interchange.
Used synchro LOS Analysis - helped with design. Good
approach and understanding at intersections. They
did not propose dual left at Rangeline. Approach is
to minimize acquisition and construction costs. Recognized
vertical alignment issues to save costs. Proposed using
retaining walls to save capacity. Identified depressions
in 434 that will need to be addressed. Mill and
resurface at night. Proposed exfiltration in locations (100-0)

Score 80 48

Criteria: Innovative Techniques (20%)

Presented option to minimum border or 8'. Discussed
saving existing pavement - saves truck lanes, etc.
Use existing piping where possible, video pipe pipes.
Save money using Lamp, also safe for supervisors. - Use
walls, save pavement, use existing stormwater system
and exfiltration trenches.

15.6 Score 70
(100-0)

impacted
 Below Ave
 to save
 permitting
 time. Recognize
 Lake Jesu
 Basin, and
 the issue
 of mitigation
 Recognized
 trail conn-
 ections.
 Will do a
 PD/E
 re-evaluation.

Criteria: Project Team/ Similar Experience (20%)

Good project team with adequate experience to
get the job done. Similar projects: Montgomery rd,
Tuskarville rd, Airport Blvd, and 426.

16 Score 80
(100-0)

Total Score

79.6

PS-5187-05/PWM- Professional Services for SR 434 from I-4 to Rangeline Road

SUBMITTAL COMPANY NAME: Earth Tech

QUALIFICATION COMMITTEE MEMBER: Co Co Wile

INSTRUCTIONS: Score each criterion from 1 to 100 based on the following general guidelines:

- 90 - 100 Outstanding, out-of-the-box, Innovative, Cost/Time Savings
- 80 - 89 Excellent, Very Good, Solid in all respects.
- 70 - 79 Good, No major weaknesses, Fully Acceptable as is
- 60 - 69 Marginal, Weak, Workable but needs clarifications
- Below 60 Unacceptable, Needs major help to be acceptable

Describe strengths, weaknesses and deficiencies to support your assessment.

Criteria: Approach to the Project (60%)

Reuse permit,
utilities coordination
end project transportation
sinkhole concerns
permit

Access management
TICP
Design Year interaction
LAMP
public involvement
QA/QC

pond 1, sufficient based on preliminary routing

24 month schedule

Score 85
(100-0)

51

Criteria: Innovative Techniques (20%)

maintain 2015 truck lanes
fence removal

Design Year interaction analysis

Score 85
(100-0)

17

Criteria: Project Team/ Similar Experience (20%)

2 guys not in the team before
Drainage & traffic

Score 80
(100-0)

16

Total Score

84

PS-5187-05/PWM- Professional Services for SR 434 from I-4 to Rangeline Road

SUBMITTAL COMPANY NAME: Keith N Schnatz

QUALIFICATION COMMITTEE MEMBER: Co-Co Wile

INSTRUCTIONS: Score each criterion from 1 to 100 based on the following general guidelines:

- 90 - 100 Outstanding, out-of-the-box, Innovative, Cost/Time Savings
- 80 - 89 Excellent, Very Good, Solid in all respects.
- 70 - 79 Good, No major weaknesses, Fully Acceptable as is
- 60 - 69 Marginal, Weak, Workable but needs clarifications
- Below 60 Unacceptable, Needs major help to be acceptable

Describe strengths, weaknesses and deficiencies to support your assessment.

Criteria: Approach to the Project (60%)

TRAFFIC analysis no 'se wall
Good project navigation Utilities 24 hr
Access Management - Night 2007 record study. QA/QC schedule

Minimize ROW cost survey - UAMP
Design Variations RAI mapping
MOT lighting
Permit Public involvement
drainage curve analysis

Score 89 52, 2
(100-0)

Criteria: Innovative Techniques (20%)

Re-use asset, permit
save truck line
intersection analysis

Score 85 17
(100-0)

Criteria: Project Team/ Similar Experience (20%)

Drainage - show no experience in SJK ROAD

Score 80 16
(100-0)

Total Score

85, 2

PS-5187-05/PWM- Professional Services for SR 434 from I-4 to Rangeline Road

SUBMITTAL COMPANY NAME: Bowyer-Singleton

QUALIFICATION COMMITTEE MEMBER: CO-CO WU

INSTRUCTIONS: Score each criterion from 1 to 100 based on the following general guidelines:

- 90 - 100 Outstanding, out-of-the-box, Innovative, Cost/Time Savings
- 80 - 89 Excellent, Very Good, Solid in all respects.
- 70 - 79 Good, No major weaknesses, Fully Acceptable as is
- 60 - 69 Marginal, Weak, Workable but needs clarifications
- Below 60 Unacceptable, Needs major help to be acceptable

Describe strengths, weaknesses and deficiencies to support your assessment.

Criteria: Approach to the Project (60%)

R/W impact review public involvement
R/W mapping per FDOT soil hole concern
End of project transition utilities coordination
FCP Noise wall
Access management SA/R/C
existing drainage concerns
MAINTENANCE strip, walls on the north side 15 month schedule
Permits

Score 90 54
(100-0)

Criteria: Innovative Techniques (20%)

Conceptual Design Review
End of project transition
W/L UTILITY ROW/A
Utility coordination

Score 90 18
(100-0)

Criteria: Project Team/ Similar Experience (20%)

same project team for several other projects

Score 90 18
(100-0)

Total Score

90

EVALUATION RANKINGS

PS-5187-05/PWM - MASTER AGREEMENT FOR SR 434 FROM I-4 TO RANGELINE ROAD

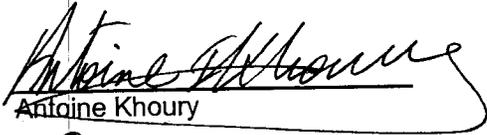
	A. Khoury	G. Johnson	J. McCollum	B. Blackadar	C. Wu	D. Fisher	C. Wetzel	TOTAL POINTS	RANKING
AVCON, INC	5	6	6	6	6	7	5	41	6
BOWYER-SINGLETON & ASSOCIATES, INC.	1	4	3	1	1	3	3	16	1
CH2M HILL, INC.	4	5	1	5	3	4	6	28	5
EARTH TECH CONSULTING, INC.	3	2	4	3	2	1	4	19	2
HDR ENGINEERING INC.	6	3	2	4	5	2	2	24	4
KEITH AND SCHNARS, P.A.	2	1	5	2	4	5	1	20	3
WBQ DESIGN & ENGINEERING, INC.	7	7	7	7	7	6	7	48	7

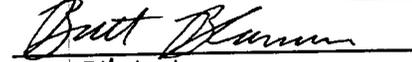
The Evaluation Committee approves the short-listed top three ranked firms for Presentations.

Bowyer-Singleton & Associates, Inc.

Earth Tech Consulting, Inc.

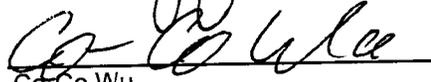
Keith and Schnars, P.A.

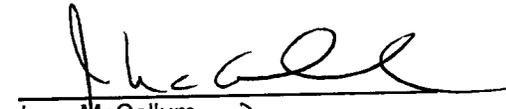

Antoine Khoury

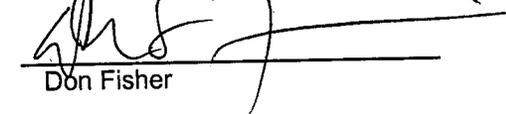

Brett Blackadar


Charles Wetzel


Gary Johnson


Co-Co Wu


Jerry McCollum


Don Fisher

**CONSULTANT SERVICES AGREEMENT (PS-5187-05/PWM)
HIGHWAY FINAL DESIGN AND PERMITTING
S.R. 434 FROM INTERSTATE 4 TO RANGELINE ROAD**

THIS AGREEMENT is made and entered into this _____ day of _____, 20____, by and between **BOWYER-SINGLTON & ASSOCIATES, INC.**, duly authorized to conduct business in the State of Florida, whose address is 520 s. Magnolia Avenue, Orlando, Florida 32801, hereinafter called the "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 32771, hereinafter called the "COUNTY".

W I T N E S S E T H:

WHEREAS, the COUNTY desires to retain the services of a competent and qualified consultant to assist Seminole County in the Highway final designs and permitting for S.R. 434 from Interstate 4 to Rangeline Road in Seminole County; and

WHEREAS, the COUNTY has requested and received expressions of interest for the retention of services of consultants; and

WHEREAS, the CONSULTANT is competent and qualified to furnish services to the COUNTY and desires to provide professional services according to the terms and conditions stated herein,

NOW, THEREFORE, in consideration of the mutual understandings and covenants set forth herein, the COUNTY and the CONSULTANT agree as follows:

SECTION 1. SERVICES. The COUNTY does hereby retain the CONSULTANT to furnish professional services and perform those tasks as further described in the Scope of Services attached hereto as Exhibit "A" and made a part hereof. Required services shall be specifically enumerated, described and depicted in the Work Orders authorizing performance of the specific project, task or study. This Agreement

standing alone does not authorize the performance of any work or require the COUNTY to place any orders for work.

SECTION 2. TERM. This Agreement shall take effect on the date of its execution by the COUNTY and shall run for eight (8) years and, at the sole option of COUNTY, may be renewed for two (2) successive periods not to exceed one (1) year each. Expiration of the term of this Agreement shall have no effect upon Work Orders issued pursuant to this Agreement and prior to the expiration date. Obligations entered therein by both parties shall remain in effect until completion of the work authorized by the Work Order.

SECTION 3. AUTHORIZATION FOR SERVICES. Authorization for performance of professional services by the CONSULTANT under this Agreement shall be in the form of written Work Orders issued and executed by the COUNTY and signed by the CONSULTANT. A sample Work Order is attached hereto as Exhibit "B". Each Work Order shall describe the services required, state the dates for commencement and completion of work and establish the amount and method of payment. The Work Orders will be issued under and shall incorporate the terms of this Agreement. The COUNTY makes no covenant or promise as to the number of available projects, nor that, the CONSULTANT will perform any project for the COUNTY during the life of this Agreement. The COUNTY reserves the right to contract with other parties for the services contemplated by this Agreement when it is determined by the COUNTY to be in the best interest of the COUNTY to do so.

SECTION 4. TIME FOR COMPLETION. The services to be rendered by the CONSULTANT shall be commenced, as specified in such Work Orders as may be issued hereunder, and shall be completed within the time specified therein. In the event the COUNTY determines that significant benefits would accrue from expediting an otherwise established time

schedule for completion of services under a given Work Order, that Work Order may include a negotiated schedule of incentives based on time savings.

SECTION 5. COMPENSATION. The COUNTY agrees to compensate the CONSULTANT for the professional services called for under this Agreement on either a "Fixed Fee" basis or on a "Time Basis Method". If a Work Order is issued under a "Time Basis Method," then CONSULTANT shall be compensated in accordance with the rate schedule attached as Exhibit "C". If a Work Order is issued for a "Fixed Fee Basis," then the applicable Work Order Fixed Fee amount shall include any and all reimbursable expenses.

SECTION 6. REIMBURSABLE EXPENSES. If a Work Order is issued on a "Time Basis Method," then reimbursable expenses are in addition to the hourly rates. Reimbursable expenses are subject to the applicable "Not-to-Exceed" or "Limitation of Funds" amount set forth in the Work Order. Reimbursable expenses may include actual expenditures made by the CONSULTANT, his employees or his professional associates in the interest of the Project for the expenses listed in the following paragraphs:

(a) Expenses of transportation, when traveling in connection with the Project, based on Sections 112.061(7) and (8), Florida Statutes, or their successor; long distance calls and telegrams; and fees paid for securing approval of authorities having jurisdiction over the Project.

(b) Expense of reproductions, postage and handling of drawings and specifications.

(c) If authorized in writing in advance by the COUNTY, the cost of other expenditures made by the CONSULTANT in the interest of the Project.

SECTION 7. PAYMENT AND BILLING.

(a) If the Scope of Services required to be performed by a Work Order is clearly defined, the Work Order shall be issued on a "Fixed Fee" basis. The CONSULTANT shall perform all work required by the Work Order but, in no event, shall the CONSULTANT be paid more than the negotiated Fixed Fee amount stated therein.

(b) If the Scope of Services is not clearly defined, the Work Order may be issued on a "Time Basis Method" and contain a Not-to Exceed amount. If a Not-to-Exceed amount is provided, the CONSULTANT shall perform all work required by the Work Order; but, in no event, shall the CONSULTANT be paid more than the Not-to-Exceed amount specified in the applicable Work Order.

(c) If the Scope of Services is not clearly defined, the Work Order may be issued on a "Time Basis Method" and contain a Limitation of Funds amount. The CONSULTANT is not authorized to exceed that amount without the prior written approval of the COUNTY. Said approval, if given by the COUNTY, shall indicate a new Limitation of Funds amount. The CONSULTANT shall advise the COUNTY whenever the CONSULTANT has incurred expenses on any Work Order that equals or exceeds eighty percent (80%) of the Limitation of Funds amount.

(d) For Work Orders issued on a "Fixed Fee Basis," the CONSULTANT may invoice the amount due based on the percentage of total Work Order services actually performed and completed; but, in no event, shall the invoice amount exceed a percentage of the Fixed Fee amount equal to a percentage of the total services actually completed. The COUNTY shall pay the CONSULTANT ninety percent (90%) of the approved amount on Work Orders issued on a "Fixed Fee Basis".

(e) For Work Orders issued on a "Time Basis Method" with a Not-to-Exceed amount, the CONSULTANT may invoice the amount due for actual

work hours performed but, in no event, shall the invoice amount exceed a percentage of the Not-to-Exceed amount equal to a percentage of the total services actually completed. The COUNTY shall pay the CONSULTANT ninety percent (90%) of the approved amount on Work Orders issued on a "Time Basis Method" with a Not-to-Exceed amount.

(f) Each Work Order issued on a "Fixed Fee Basis" or "Time Basis Method" with a Not-to-Exceed amount shall be treated separately for retainage purposes. If the COUNTY determines that work is substantially complete and the amount retained is considered to be in excess, the COUNTY may, at its sole and absolute discretion, release the retainage or any portion thereof.

(g) For Work Orders issued on a "Time Basis Method" with a Limitation of Funds amount, the CONSULTANT may invoice the amount due for services actually performed and completed. The COUNTY shall pay the CONSULTANT one hundred percent (100%) of the approved amount on Work Orders issued on a "Time Basis Method" with a Limitation of Funds amount.

(h) Payments shall be made by the COUNTY to the CONSULTANT when requested as work progresses for services furnished, but not more than once monthly. Each Work Order shall be invoiced separately. CONSULTANT shall render to COUNTY, at the close of each calendar month, an itemized invoice properly dated, describing any services rendered, the cost of the services, the name and address of the CONSULTANT, Work Order Number, Contract Number and all other information required by this Agreement.

The original invoice shall be sent to:

Director of County Finance
Seminole County Board of County Commissioners
Post Office Box 8080
Sanford, Florida 32772

A duplicate copy of the invoice shall be sent to:

Seminole County Engineering Department
520 W. Lake Mary Blvd., Suite 200
Sanford, Florida 32773

(i) Payment shall be made after review and approval by COUNTY within thirty (30) days of receipt of a proper invoice from the CONSULTANT.

SECTION 8. GENERAL TERMS OF PAYMENT AND BILLING.

(a) Upon satisfactory completion of work required hereunder and, upon acceptance of the work by the COUNTY, the CONSULTANT may invoice the COUNTY for the full amount of compensation provided for under the terms of this Agreement including any retainage and less any amount already paid by the COUNTY. The COUNTY shall pay the CONSULTANT within thirty (30) days of receipt of proper invoice.

(b) The COUNTY may perform or have performed an audit of the records of the CONSULTANT after final payment to support final payment hereunder. This audit would be performed at a time mutually agreeable to the CONSULTANT and the COUNTY subsequent to the close of the final fiscal period in which the last work is performed. Total compensation to the CONSULTANT may be determined subsequent to an audit as provided for in subsections (b) and (c) of this Section, and the total compensation so determined shall be used to calculate final payment to the CONSULTANT. Conduct of this audit shall not delay final payment as provided by subsection (a) of this Section.

(c) In addition to the above, if federal funds are used for any work under the Agreement, the Department of Housing and Urban Development, the Comptroller General of the United States, or any of their duly authorized representatives, shall have access to any books, documents, papers, and records, of the CONSULTANT which are directly pertinent to work performed under this Agreement for purposes of making audit, examination, excerpts and transcriptions.

(d) The CONSULTANT agrees to maintain all books, documents, papers, accounting records and other evidences pertaining to work performed under this Agreement in such a manner as will readily conform to the terms of this Agreement and to make such materials available at the CONSULTANT'S office at all reasonable times during the Agreement period and for five (5) years from the date of final payment under the contract for audit or inspection as provided for in subsections (b) and (c) of this Section.

(e) In the event any audit or inspection conducted after final payment, but within the period provided in paragraph (d) of this Section reveals any overpayment by the COUNTY under the terms of the Agreement, the CONSULTANT shall refund such overpayment to the COUNTY within thirty (30) days of notice by the COUNTY.

SECTION 9. RESPONSIBILITIES OF THE CONSULTANT.

(a) The CONSULTANT shall be responsible for the professional quality, technical accuracy, competence, methodology, accuracy and the coordination of all of the following which are listed for illustration purposes and not as a limitation: documents, analysis, reports, data, plans, plats, maps, surveys, specifications, and any and all other services of whatever type or nature furnished by the CONSULTANT under this Agreement. The CONSULTANT shall, without additional compensation, correct or revise any errors or deficiencies in his plans, analysis, data, reports, designs, drawings, specifications, and any and all other services of whatever type or nature.

(b) Neither the COUNTY'S review, approval or acceptance of, nor payment for, any of the services required shall be construed to operate as a waiver of any rights under this Agreement nor of any cause of action arising out of the performance of this Agreement and the CONSULTANT shall be and always remain liable to the COUNTY in accordance

with applicable law for any and all damages to the COUNTY caused by the CONSULTANT'S negligent or wrongful performance of any of the services furnished under this Agreement.

SECTION 10. OWNERSHIP OF DOCUMENTS. All deliverable analysis, reference data, survey data, plans and reports or any other form of written instrument or document that may result from the CONSULTANT'S services or have been created during the course of the CONSULTANT'S performance under this Agreement shall become the property of the COUNTY after final payment is made to the CONSULTANT.

SECTION 11. TERMINATION.

(a) The COUNTY may, by written notice to the CONSULTANT terminate this Agreement or any Work Order issued hereunder, in whole or in part, at any time, either for the COUNTY'S convenience or because of the failure of the CONSULTANT to fulfill its Agreement obligations. Upon receipt of such notice, the CONSULTANT shall:

(1) immediately discontinue all services affected unless the notice directs otherwise, and

(2) deliver to the COUNTY all data, drawings, specifications, reports, estimates, summaries, and any and all such other information and materials of whatever type or nature as may have been accumulated by the CONSULTANT in performing this Agreement, whether completed or in process.

(b) If the termination is for the convenience of the COUNTY, the CONSULTANT shall be paid compensation for services performed to the date of termination. If this Agreement calls for the payment based on a Fixed Fee amount, the CONSULTANT shall be paid no more than a percentage of the Fixed Fee amount equivalent to the percentage of the completion of work, as determined solely and conclusively by the COUNTY, contemplated by this Agreement.

(c) If the termination is due to the failure of the CONSULTANT to fulfill its Agreement obligations, the COUNTY may take over the work and prosecute the same to completion by other Agreements or otherwise. In such case, the CONSULTANT shall be liable to the COUNTY for all reasonable additional costs occasioned to the COUNTY thereby. The CONSULTANT shall not be liable for such additional costs if the failure to perform the Agreement arises without any fault or negligence of the CONSULTANT; provided, however, that the CONSULTANT shall be responsible and liable for the actions of its subcontractors, agents, employees and persons and entities of a similar type or nature. Such causes may include acts of God or of the public enemy, acts of the COUNTY in either its sovereign or contractual capacity, fires, floods, epidemics, quarantine restrictions, strikes, freight embargoes, and unusually severe weather; but, in every case, the failure to perform must be beyond the control and without any fault or negligence of the CONSULTANT.

(d) If, after notice of termination for failure to fulfill its Agreement obligations, it is determined that the CONSULTANT had not so failed, the termination shall be conclusively deemed to have been effected for the convenience of the COUNTY. In such event, adjustment in the Agreement price shall be made as provided in subsection (b) of this Section.

(e) The rights and remedies of the COUNTY provided for in this Section are in addition and supplemental to any and all other rights and remedies provided by law or under this Agreement.

SECTION 12. AGREEMENT AND WORK ORDER IN CONFLICT. Whenever the terms of this Agreement conflict with any Work Order issued pursuant to it, the Agreement shall prevail.

SECTION 13. EQUAL OPPORTUNITY EMPLOYMENT. The CONSULTANT agrees that it will not discriminate against any employee or applicant for

employment for work under this Agreement because of race, color, religion, sex, age, disability, or national origin and will take steps to ensure that applicants are employed, and employees are treated during employment, without regard to race, color, religion, sex, age, disability, or national origin. This provision shall include, but not be limited to, the following: employment, upgrading, demotion or transfer; recruitment advertising; layoff or termination; rates of pay or other forms of compensation; and selection for training, including apprenticeship.

SECTION 14. NO CONTINGENT FEES. The CONSULTANT warrants that it has not employed or retained any company or person, other than a bona fide employee working solely for the CONSULTANT to solicit or secure this Agreement and that it has not paid or agreed to pay any person, company, corporation, individual or firm, other than a bona fide employee working solely for the CONSULTANT, any fee, commission, percentage, gift, or other consideration contingent upon or resulting from award or making of this Agreement. For the breach or violation of this provision, the COUNTY shall have the right to terminate the Agreement at its sole discretion, without liability and to deduct from the Agreement price, or otherwise recover, the full amount of such fee, commission, percentage, gift, or consideration.

SECTION 15. CONFLICT OF INTEREST.

(a) The CONSULTANT agrees that it will not contract for or accept employment for the performance of any work or service with any individual, business, corporation or government unit that would create a conflict of interest in the performance of its obligations pursuant to this Agreement with the COUNTY.

(b) The CONSULTANT agrees that it will neither take any action nor engage in any conduct that would cause any COUNTY employee to

violate the provisions of Chapter 112, Florida Statutes, relating to ethics in government.

(c) In the event that CONSULTANT causes or in any way promotes or encourages a COUNTY officer, employee, or agent to violate Chapter 112, Florida Statutes, the COUNTY shall have the right to terminate this Agreement.

SECTION 16. ASSIGNMENT. This Agreement, or any interest herein, shall not be assigned, transferred, or otherwise encumbered, under any circumstances, by the parties hereto without prior written consent of the other party and in such cases only by a document of equal dignity herewith.

SECTION 17. SUBCONTRACTORS. In the event that the CONSULTANT, during the course of the work under this Agreement, requires the services of any subcontractors or other professional associates in connection with services covered by this Agreement, the CONSULTANT must first secure the prior express written approval of the COUNTY. If subcontractors or other professional associates are required in connection with the services covered by this Agreement, CONSULTANT shall remain fully responsible for the services of subcontractors or other professional associates.

SECTION 18. INDEMNIFICATION OF COUNTY. The CONSULTANT agrees to hold harmless, replace, and indemnify the COUNTY, its commissioners, officers, employees, and agents against any and all claim, losses, damages or lawsuits for damages, arising from the negligent, reckless, or intentionally wrongful provision of services hereunder by the CONSULTANT, whether caused by the CONSULTANT or otherwise.

SECTION 19. INSURANCE.

(a) GENERAL. The CONSULTANT shall at the CONSULTANT'S own cost, procure the insurance required under this Section.

(1) The CONSULTANT shall furnish the COUNTY with a Certificate of Insurance signed by an authorized representative of the insurer evidencing the insurance required by this Section (Professional Liability, Workers' Compensation/Employer's Liability and Commercial General Liability). The COUNTY, its officials, officers, and employees shall be named additional insured under the Commercial General Liability policy. The Certificate of Insurance shall provide that the COUNTY shall be given not less than thirty (30) days written notice prior to the cancellation or restriction of coverage. Until such time as the insurance is no longer required to be maintained by the CONSULTANT, the CONSULTANT shall provide the COUNTY with a renewal or replacement Certificate of Insurance not less than thirty (30) days before expiration or replacement of the insurance for which a previous certificate has been provided.

(2) The Certificate shall contain a statement that it is being provided in accordance with the Agreement and that the insurance is in full compliance with the requirements of the Agreement. In lieu of the statement on the Certificate, the CONSULTANT shall, at the option of the COUNTY submit a sworn, notarized statement from an authorized representative of the insurer that the Certificate is being provided in accordance with the Agreement and that the insurance is in full compliance with the requirements of the Agreement. **The Certificate shall have this Agreement number clearly marked on its face.**

(3) In addition to providing the Certificate of Insurance, if required by the COUNTY, the CONSULTANT shall, within thirty (30) days after receipt of the request, provide the COUNTY with a certified copy of each of the policies of insurance providing the coverage required by this Section.

(4) Neither approval by the COUNTY nor failure to disapprove the insurance furnished by a CONSULTANT shall relieve the CONSULTANT of the CONSULTANT'S full responsibility for performance of any obligation including CONSULTANT indemnification of COUNTY under this Agreement.

(b) INSURANCE COMPANY REQUIREMENTS. Insurance companies providing the insurance under this Agreement must meet the following requirements:

(1) Companies issuing policies other than Workers' Compensation, must be authorized to conduct business in the State of Florida and prove same by maintaining Certificates of Authority issued to the companies by the Department of Insurance of the State of Florida. Policies for Workers' Compensation may be issued by companies authorized as a group self-insurer by Section 440.57, Florida Statutes.

(2) In addition, such companies other than those authorized by Section 440.57, Florida Statutes, shall have and maintain a Best's Rating of "A" or better and a Financial Size Category of "VII" or better according to A.M. Best Company.

(3) If, during the period which an insurance company is providing the insurance coverage required by this Agreement, an insurance company shall: 1) lose its Certificate of Authority, 2) no longer comply with Section 440.57, Florida Statutes, or 3) fail to maintain the requisite Best's Rating and Financial Size Category, the CONSULTANT shall, as soon as the CONSULTANT has knowledge of any such circumstance, immediately notify the COUNTY and immediately replace the insurance coverage provided by the insurance company with a different insurance company meeting the requirements of this Agreement. Until such time as the CONSULTANT has replaced the unacceptable insurer with an insurer acceptable to the COUNTY the CONSULTANT shall be deemed to be in default

of this Agreement.

(c) SPECIFICATIONS. Without limiting any of the other obligations or liability of the CONSULTANT, the CONSULTANT shall, at the CONSULTANT'S sole expense, procure, maintain and keep in force amounts and types of insurance conforming to the minimum requirements set forth in this subsection. Except as otherwise specified in the Agreement, the insurance shall become effective prior to the commencement of work by the CONSULTANT and shall be maintained in force until the Agreement completion date. The amounts and types of insurance shall conform to the following minimum requirements.

(1) Workers' Compensation/Employer's Liability.

(A) The CONSULTANT'S insurance shall cover the CONSULTANT for liability which would be covered by the latest edition of the standard Workers' Compensation Policy, as filed for use in Florida by the National Council on Compensation Insurance, without restrictive endorsements. The CONSULTANT will also be responsible for procuring proper proof of coverage from its subcontractors of every tier for liability which is a result of a Workers' Compensation injury to the subcontractor's employees. The minimum required limits to be provided by both the CONSULTANT and its subcontractors are outlined in subsection (c) below. In addition to coverage for the Florida Workers' Compensation Act, where appropriate, coverage is to be included for the United States Longshoremen and Harbor Workers' Compensation Act, Federal Employers' Liability Act and any other applicable federal or state law.

(B) Subject to the restrictions of coverage found in the standard Workers' Compensation Policy, there shall be no maximum limit on the amount of coverage for liability imposed by the Florida Workers' Compensation Act, the United States Longshoremen's and Harbor Workers' Compensation Act, or any other coverage customarily insured

under Part One of the standard Workers' Compensation Policy.

(C) The minimum amount of coverage under Part Two of the standard Workers' Compensation Policy shall be:

\$ 500,000.00	(Each Accident)
\$1,000,000.00	(Disease-Policy Limit)
\$ 500,000.00	(Disease-Each Employee)

(2) Commercial General Liability.

(A) The CONSULTANT'S insurance shall cover the CONSULTANT for those sources of liability which would be covered by the latest edition of the standard Commercial General Liability Coverage Form (ISO Form CG 00 01), as filed for use in the State of Florida by the Insurance Services Office, without the attachment of restrictive endorsements other than the elimination of Coverage C, Medical Payment and the elimination of coverage for Fire Damage Legal Liability.

(B) The minimum limits to be maintained by the CONSULTANT (inclusive of any amounts provided by an Umbrella or Excess policy) shall be as follows:

	<u>LIMITS</u>
General Aggregate	\$Three (3) Times the Each Occurrence Limit
Personal & Advertising Injury Limit	\$1,000,000.00
Each Occurrence Limit	\$1,000,000.00

(3) Professional Liability Insurance. The CONSULTANT shall carry limits of not less than ONE MILLION AND NO/100 DOLLARS (\$1,000,000.00).

(d) COVERAGE. The insurance provided by CONSULTANT pursuant to this Agreement shall apply on a primary basis and any other insurance or self-insurance maintained by the COUNTY or the COUNTY'S officials, officers, or employees shall be excess of and not contributing with the insurance provided by or on behalf of the CONSULTANT.

(e) OCCURRENCE BASIS. The Workers' Compensation Policy and the Commercial General Liability required by this Agreement shall be provided on an occurrence rather than a claims-made basis. The Professional Liability insurance policy must either be on an occurrence basis, or, if a claims-made basis, the coverage must respond to all claims reported within three (3) years following the period for which coverage is required and which would have been covered had the coverage been on an occurrence basis.

(f) OBLIGATIONS. Compliance with the foregoing insurance requirements shall not relieve the CONSULTANT, its employees or agents of liability from any obligation under a Section or any other portions of this Agreement.

SECTION 20. ALTERNATIVE DISPUTE RESOLUTION.

(a) In the event of a dispute related to any performance or payment obligation arising under this Agreement, the parties agree to exhaust COUNTY protest procedures prior to filing suit or otherwise pursuing legal remedies. COUNTY procedures for proper invoice and payment disputes are set forth in Section 55.1, "Prompt Payment Procedures," Seminole County Administrative Code.

(b) CONSULTANT agrees that it will file no suit or otherwise pursue legal remedies based on facts or evidentiary materials that were not presented for consideration in the COUNTY protest procedures set forth in subsection (a) above of which the CONSULTANT had knowledge and failed to present during the COUNTY protest procedures.

(c) In the event that COUNTY protest procedures are exhausted and a suit is filed or legal remedies are otherwise pursued, the parties shall exercise best efforts to resolve disputes through voluntary mediation. Mediator selection and the procedures to be employed in voluntary mediation shall be mutually acceptable to the parties. Costs

of voluntary mediation shall be shared equally among the parties participating in the mediation.

SECTION 21. REPRESENTATIVES OF THE COUNTY AND THE CONSULTANT.

(a) It is recognized that questions in the day-to-day conduct of performance pursuant to this Agreement will arise. The COUNTY, upon request by the CONSULTANT, shall designate in writing and shall advise the CONSULTANT in writing of one (1) or more of its employees to whom all communications pertaining to the day-to-day conduct of this Agreement shall be addressed. The designated representative shall have the authority to transmit instructions, receive information and interpret and define the COUNTY'S policy and decisions pertinent to the work covered by this Agreement.

(b) The CONSULTANT shall, at all times during the normal work week, designate or appoint one or more representatives of the CONSULTANT who are authorized to act in behalf of and bind the CONSULTANT regarding all matters involving the conduct of the performance pursuant to this Agreement and shall keep the COUNTY continually and effectively advised of such designation.

SECTION 22. ALL PRIOR AGREEMENTS SUPERSEDED. This document incorporates and includes all prior negotiations, correspondence, conversations, agreements or understandings applicable to the matters contained herein and the parties agree that there are no commitments, agreements or understandings concerning the subject matter of this Agreement that are not contained or referred to in this document. Accordingly, it is agreed that no deviation from the terms hereof shall be predicated upon any prior representations or agreements, whether oral or written.

SECTION 23. MODIFICATIONS, AMENDMENTS OR ALTERATIONS. No modification, amendment or alteration in the terms or conditions contained

herein shall be effective unless contained in a written document executed with the same formality and of equal dignity herewith.

SECTION 24. INDEPENDENT CONTRACTOR. It is agreed that nothing herein contained is intended or should be construed as in any manner creating or establishing a relationship of co-partners between the parties, or as constituting the CONSULTANT (including its officers, employees, and agents) the agent, representative, or employee of the COUNTY for any purpose, or in any manner, whatsoever. The CONSULTANT is to be and shall remain forever an independent contractor with respect to all services performed under this Agreement.

SECTION 25. EMPLOYEE STATUS. Persons employed by the CONSULTANT in the performance of services and functions pursuant to this Agreement shall have no claim to pension, workers' compensation, unemployment compensation, civil service or other employee rights or privileges granted to the COUNTY'S officers and employees either by operation of law or by the COUNTY.

SECTION 26. SERVICES NOT PROVIDED FOR. No claim for services furnished by the CONSULTANT not specifically provided for herein shall be honored by the COUNTY.

SECTION 27. PUBLIC RECORDS LAW. CONSULTANT acknowledges COUNTY'S obligations under Article I, Section 24, Florida Constitution and Chapter 119, Florida Statutes, to release public records to members of the public upon request. CONSULTANT acknowledges that COUNTY is required to comply with Article I, Section 24, Florida Constitution and Chapter 119, Florida Statutes, in the handling of the materials created under this Agreement and that said statute controls over the terms of this Agreement.

SECTION 28. COMPLIANCE WITH LAWS AND REGULATIONS. In providing all services pursuant to this Agreement, the CONSULTANT shall abide by

all statutes, ordinances, rules, and regulations pertaining to, or regulating the provisions of, such services, including those now in effect and hereafter adopted. Any violation of said statutes, ordinances, rules, or regulations shall constitute a material breach of this Agreement, and shall entitle the COUNTY to terminate this Agreement immediately upon delivery of written notice of termination to the CONSULTANT.

SECTION 29. NOTICES. Whenever either party desires to give notice unto the other, it must be given by written notice, sent by registered or certified United States mail, with return receipt requested, addressed to the party for whom it is intended at the place last specified and the place for giving of notice shall remain such until it shall have been changed by written notice in compliance with the provisions of this Section. For the present, the parties designate the following as the respective places for giving of notice, to-wit:

For COUNTY:

Seminole County Engineering Department
520 W. Lake Mary Blvd., Suite 200
Sanford, Florida 32773

For CONSULTANT:

Bowyer-Singleton & Associates, Inc.
520 S. Magnolia Avenue
Orlando, Florida 32801

SECTION 30. RIGHTS AT LAW RETAINED. The rights and remedies of the COUNTY, provided for under this Agreement, are in addition and supplemental to any other rights and remedies provided by law.

IN WITNESS WHEREOF, the parties hereto have made and executed this Agreement on the date below written for execution by the COUNTY.

ATTEST:

BOWYER-SINGLETON & ASSOCIATES, INC.

, Secretary

By: _____
, President

(CORPORATE SEAL)

Date: _____

ATTEST:

BOARD OF COUNTY COMMISSIONERS
SEMINOLE COUNTY, FLORIDA

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

By: _____
CARLTON HENLEY, Chairman

Date: _____

For use and reliance
of Seminole County only.

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

Approved as to form and
legal sufficiency.

County Attorney
AC/lpk
8/24/05
ps-5187

3 Attachments:

- Exhibit "A" - Scope of Services
- Exhibit "B" - Sample Work Order
- Exhibit "C" - Rate Schedule
- Exhibit "D" - Truth in Negotiations Certificate

EXHIBIT A-1

**TENTATIVE SCOPE OF SERVICES
PHASE II - HIGHWAY FINAL DESIGN & PERMITTING**

County Project Number: *PS-XXXX*
Financial Project ID: *XXXX*
Description: *SR 434 from Interstate 4 to Rangeline Rd in Seminole County*

EXHIBIT A-1

1	PURPOSE	1
2	PROJECT DESCRIPTION	2
2.1	Roadway	2
2.2	Drainage	2
2.3	Utility Coordination	2
2.4	Permits	2
2.5	Structures (N/A)	2
2.6	Signing and Pavement Markings	2
2.7	Signals	2
2.8	Landscape Architecture	3
2.9	Survey	3
2.10	Geotechnical	3
2.11	Project Schedule	3
2.12	Submittals	4
2.13	Provisions for Work	4
2.14	Services to be Performed by the COUNTY and or FDOT	6
3	PROJECT GENERAL TASKS	6
3.1	Public Involvement	6
3.2	Joint Project Agreements	6
3.3	Contract Maintenance	7
3.4	Prime Project Manager Meetings	7
4	ROADWAY ANALYSIS	8
4.1	Typical Section Package	8
4.2	Pavement Design Package	8
4.3	Access Management	8
4.4	Horizontal/Vertical Master Design Files	8
4.5	Cross Section Design Files	8
4.6	Traffic Control Analysis	9
4.7	Design Report	9
4.8	Computation Book and Quantities	9
4.9	Cost Estimate	9
4.10	Field Reviews	9
4.11	Technical Meetings	9
4.12	Quality Assurance/Quality Control	9
4.13	Supervision	9
4.14	Coordination	9
5	ROADWAY PLANS	10
5.1	Key Sheet	10
5.2	Summary of Pay Items Including Quantity Input	10
5.3	Drainage Map	10
5.4	Typical Section Sheets	10
5.5	General Notes/Pay Item Notes	10
5.6	Summary of Quantities	10
5.7	Bridge Hydraulics Recommendation Sheets (N/A)	10
5.8	Summary of Drainage Structures	10
5.9	Project Layout	10

5.10	Plan/Profile Sheet	10
5.11	Special Profile	10
5.12	Back of Sidewalk Profile Sheet	10
5.13	Ramp Terminal Details (Plan View)	10
5.14	Intersection Layout Details	10
5.15	Miscellaneous Detail Sheets	10
5.16	Drainage Structure Sheet	10
5.17	Miscellaneous Drainage Detail Sheets	10
5.18	Retention/Detention Ponds Detail Sheet	10
5.19	Retention Pond Cross Sections	10
5.20	Roadway Soil Survey Sheet	10
5.21	Cross Sections	10
5.22	Traffic Control Data Sheet	10
5.23	Utility Adjustment Sheets	10
5.24	Erosion Control Plan	10
5.25	SWPPP	10
5.26	Project Control Network Sheet	11
5.27	Utility Verification Sheet (SUE Data)	11
5.28	Quality Assurance/Quality Control	11
5.29	Supervision	11
6	DRAINAGE ANALYSIS	11
6.1	Determine Base Clearance Water Elevation	11
6.2	Pond Siting Analysis and Report	11
6.3	Design of Outfalls	11
6.4	Design of Stormwater Management Facility (Offsite Pond)	11
6.5	Design of Storm Drains	11
6.6	Optional Culvert Material	11
6.7	French Drain Design	12
6.8	Drainage Design Documentation Report	12
6.9	Bridge Hydraulic Report	12
6.10	Cost Estimate	12
6.11	Technical Special Provisions	12
6.12	Field Reviews	12
6.13	Technical Meetings	12
6.14	Quality Assurance/Quality Control	12
6.15	Supervision	12
6.16	Coordination	12
7	UTILITIES	12
7.1	Identify Existing UAO(s)	12
7.2	Make Utility Contacts	12
7.3	Preliminary Utility Meeting	13
7.4	Individual/Field Meetings	13
7.5	Collect and Review Plans and Data from UAO(s)	13
7.6	Utility Design Meeting	13
7.7	Review Utility Markups	13
7.8	Utility Coordination/Follow-up	13
7.9	Utility Constructability Review	13
8	ENVIRONMENTAL PERMITS	14
8.1	Preliminary Project Research	14
8.2	Complete Permit Involvement Form	14
8.3	Establish Wetland Jurisdictional Lines	14

8.4	Agency Verification of Wetland Data	14
8.5	Complete and Submit All Required Permit Applications	14
8.6	Prepare Dredge and Fill Sketches	15
8.7	Prepare USCG Permit Sketches	15
8.8	Prepare Easement Sketches	15
8.9	Prepare Right-of-Way Occupancy Sketches	15
8.10	Prepare Coastal Construction Control Line (CCCL) Permit Sketches	15
8.11	Prepare Tree Permit Information	15
8.12	Mitigation Coordination and Meetings	15
8.13	Mitigation Design	15
8.14	Environmental Clearances	16
8.15	Technical Meetings	16
8.16	Quality Assurance/Quality Control	16
8.17	Supervision	16
8.18	Coordination	16
9	STRUCTURES - SUMMARY AND MISCELLANEOUS TASKS AND DRAWINGS (N/A)	16
10	STRUCTURES - BRIDGE CONCEPT REPORT (N/A)	16
11	STRUCTURES - MEDIUM SPAN CONCRETE BRIDGE (N/A)	16
12	STRUCTURES - MISCELLANEOUS	16
12.1	Mast Arms	16
13	SIGNING AND PAVEMENT MARKING ANALYSIS	16
13.1	Reference and Master Design File	16
13.2	Multi-Post Sign Support Calculations	17
13.3	Sign Panel Design Analysis	17
13.4	Quantities	17
13.5	Computation Book	17
13.6	Cost Estimates	17
13.7	Technical Special Provisions	17
13.8	Field Reviews	17
13.9	Technical Meetings	17
13.10	Quality Assurance/Quality Control	17
13.11	Supervision	17
13.12	Coordination	17
14	SIGNING AND PAVEMENT MARKING PLANS	17
14.1	Key Sheet	17
14.2	Tabulation of Quantities	17
14.3	General Notes/Pay Item Notes	17
14.4	Plan Sheet	17
14.5	Typical Details	17
14.6	Guide Sign Work Sheet(s)	17
14.7	Interim Standards	17
14.8	Quality Assurance/Quality Control	17
14.9	Supervision	17
15	SIGNALIZATION ANALYSIS	18
15.1	Traffic Data Collection	18
15.2	Traffic Data Analysis	18

15.3	Reference and Master Signalization Design File	18
15.4	Overhead Street Name Sign Design	18
15.5	Pole Elevation Analysis	18
15.6	Quantities	18
15.7	Cost Estimate	18
15.8	Technical Special Provisions	18
15.9	Field Reviews	18
15.10	Technical Meetings	18
15.11	Quality Assurance/Quality Control	18
15.12	Supervision	18
15.13	Coordination	18
16	SIGNALIZATION PLANS	19
16.1	Key Sheet	19
16.2	Tabulation of Quantities	19
16.3	General Notes/Pay Item Notes	19
16.4	Plan Sheet	19
16.5	Interconnect Plans	19
16.6	Traffic Monitoring Site	19
16.7	Guide Sign Worksheet	19
16.8	Special Details	19
16.9	Special Service Point Details	19
16.10	Mast Arm Tabulation Sheet	19
16.11	Quality Assurance/Quality Control	19
16.12	Supervision	19
17	LANDSCAPE ARCHITECTURE ANALYSIS	19
17.1	Data Collection	19
17.2	Site Inventory and Analysis	19
17.3	Planting Design	19
17.4	Computation Book and Quantities	19
17.5	Cost Estimates	19
17.6	Technical Special Provisions	20
17.7	Field Reviews	20
17.8	Technical Meetings	20
17.9	Quality Assurance/Quality Control	20
17.10	Supervision	20
17.11	Coordination	20
18	LANDSCAPE ARCHITECTURE PLANS	20
18.1	Key Sheet	20
18.2	Tabulation of Quantities	20
18.3	General Notes	20
18.4	Tree and Vegetation Inventory, Protection and Relocation Plans	20
18.5	Planting Plans for Linear Roadway Projects	20
18.6	Planting Details and Notes	20
18.7	Cost Estimate	20
18.8	Quality Assurance/Quality Control	20
18.9	Supervision	20
19	SURVEY	20
19.1	Horizontal Project Network Control (HPNC)	21
19.2	Vertical Project Network Control (VPNC)	21

19.3	Alignment and/or Existing Right of Way Lines	21
19.4	Aerial Targets	21
19.5	Reference Points	21
19.6	Topography (2D)	21
19.7	Digital Terrain Model (DTM)	21
19.8	Roadway Cross Sections/Profiles	21
19.9	Side Street Surveys	21
19.10	Underground Utilities	22
19.11	Outfall Survey	22
19.12	Drainage Survey	22
19.13	Bridge Survey (N/A)	22
19.14	Channel Survey	22
19.15	Pond Site Survey	22
19.16	Mitigation Survey	22
19.17	Jurisdiction Line Survey	22
19.18	Geotechnical Support	22
19.19	Sectional/Grant Survey	22
19.20	Subdivision Location	23
19.21	Maintained R/W	23
19.22	Boundary Survey	23
19.23	Water Boundary Survey	23
19.24	Right of Way Staking	23
19.25	Right of Way Monumentation	23
19.26	Line Cutting	23
19.27	Work Zone Safety	23
19.28	Miscellaneous Surveys	23
19.29	Supplemental Surveys	23
19.30	Document Research	23
19.31	Field Review	23
19.32	Technical Meetings	24
19.33	Quality Control/Quality Assurance	24
19.34	Supervision	24
19.35	Coordination	24
20	RIGHT OF WAY MAPPING	24
20.1	Alignment	24
20.2	Section and 1/4 Section Lines	24
20.3	Subdivisions	24
20.4	Existing Right-of way	24
20.5	Topography	24
20.6	Parent Tract Properties / Existing Easements	24
20.7	Proposed R/W Requirements	24
20.8	Limits of Construction	24
20.9	Jurisdictional / Agency Lines	25
20.10	Control Survey Cover Sheet	25
20.11	Control Survey Key Sheet	25
20.12	Control Survey Detail Sheet	25
20.13	Right-of-Way Map Cover Sheet	25
20.14	Right-of-Way Map Key Sheet	25
20.15	Right-of-Way Map Detail Sheet	25
20.16	Reference Point Sheet	25
20.17	Table of Ownerships Sheet	25
20.18	TIITF Sketches	25
20.19	Title Search Map	25
20.20	Title Search Report	25
20.21	Legal Descriptions	25

20.22	Final maps / Plans Comparison	25
20.23	Field Reviews	25
20.24	Technical Meetings	26
20.25	Quality Assurance / Quality Control	26
20.26	Supervision	26
20.27	Coordination	26
21	GEOTECHNICAL	26
21.1	Document Collection and Review	26
21.2	Detailed Boring Location Plan	27
21.3	Stake Borings/Utility Clearance	27
21.4	MOT Plans for Field Investigation	27
21.5	Drilling Access Permits	27
21.6	Property Clearances	27
21.7	Groundwater Monitoring	27
21.8	LBR Sampling	27
21.9	Coordination of Field Work	27
21.10	Soil and Rock Classification - Roadway	27
21.11	Design LBR	27
21.12	Laboratory Data	27
21.13	Seasonal High Water Table	28
21.14	Parameters for Water Retention Areas	28
21.15	Limits of Unsuitable Material	28
21.16	ASCII Files for Cross-Sections	28
21.17	Embankment Settlement and Stability	28
21.18	Stormwater Volume Recovery and/or Background Seepage Analysis	28
21.19	Geotechnical Recommendations	28
21.20	Preliminary Report	28
21.21	Final Report	29
21.22	Auger Boring Drafting	29
21.23	SPT Boring Drafting	29
21.24	Detailed Boring Location Plan	29
21.25	Stake Borings/Utility Clearance	29
21.26	MOT Plans for Field Investigation	29
21.27	Drilling Access Permits	30
21.28	Property Clearances	30
21.29	Collection of Corrosion Samples	30
21.30	Coordination of Field Work	30
21.31	Soil and Rock Classification - Structures	30
21.32	Tabulation of Laboratory Data	30
21.33	Design Groundwater Level for Structures	30
21.34	Selection of Foundation Alternatives (BDR) (N/A)	30
21.35	Detailed Analysis of Selected Foundation Alternate(s)	30
21.36	Bridge Construction and Testing Recommendations (N/A)	31
21.37	Lateral Load Analysis (Optional)	31
21.38	Walls	31
21.39	Sheet Pile Wall Analysis (Optional)	31
21.40	Soil Parameters for Signs, Signals, High Mast Lights, and Strain Poles and Geotechnical Recommendations	31
21.41	Box Culvert Analysis	31
21.42	Preliminary Report – BDR (N/A)	31
21.43	Final Report - Bridge and Associated Walls (N/A)	32
21.44	Final Reports - Signs, Signals, Box Culvert, Walls, and High Mast Lights	32
21.45	Drafting	33
21.46	Technical Special Provisions	33
21.47	Field Reviews	33

21.48	Technical Meetings	33
21.49	Quality Assurance/Quality Control	33
21.50	Supervision	33
21.51	Coordination	33
21.52	Optional Preliminary Contamination Assessment	33
22	RIGHT OF WAY ASSESSMENT	33
22.1	Coordination	33
22.2	Initial Inspection	33
22.3	Alternative Analysis	33
22.4	Identify Compensable Impacts	34
22.5	Appraisals	34
22.6	Identify cost efficient compensable impacts	34
22.7	Values and Damages Report	34
22.8	Reports on Assessment Alternatives	34
23	PROJECT REQUIREMENTS	34
23.1	Liaison Office	34
23.2	Key Personnel	34
23.3	Progress Reporting	34
23.4	Correspondence	34
23.5	Professional Endorsement	34
23.6	Computer Automation	35
23.7	Coordination With Other Consultants	35
23.8	Optional Services	35
24	INVOICING LIMITS	35

**SCOPE OF SERVICES FOR CONSULTING ENGINEERING SERVICES
HIGHWAY AND BRIDGE FINAL DESIGN & PERMITTING**

This Exhibit forms an integral part of the agreement between the Seminole County Board of County Commissioners (hereinafter referred to as the COUNTY) and XXXX (hereinafter referred to as the CONSULTANT) relative to the transportation facility described as follows:

County Project Number: XXXX
Financial Project ID: XXXX
Description: *SR 434 from Interstate 4 to Rangeline Rd in Seminole County*

1 PURPOSE

The purpose of this Exhibit is to describe the scope of work and the responsibilities of the CONSULTANT and the COUNTY in connection with the design and preparation of a complete set of construction contract plans and special provisions, if necessary, for:

- Roadway improvements to the transportation facility described herein

The general objective is for the CONSULTANT to prepare a set of plans to be used by the contractor to build the project, and by the COUNTY to ensure the project is built as designed and to specifications. Elements of work shall include roadways, structures, intersections, geotechnical activities, surveys, drainage, signing and pavement markings, signalization, utility relocation, landscaping right-of-way maps and legal descriptions, maintenance of traffic, cost estimates, environmental permits, environmental mitigation plans, quantity computation books, and all necessary incidental items for a complete project.

The Scope of Services establishes which items of work described in the Plan Preparation Manual(s) published by the Florida Department of Transportation (hereinafter referred to as the DEPARTMENT) and other pertinent manuals to accomplish the work are specifically included in this contract, and also which of the items of work will be the responsibility of the CONSULTANT or the COUNTY.

All plans and design documents are to be prepared with standard English values in accordance with all applicable COUNTY and DEPARTMENT Manuals and guidelines.

The CONSULTANT shall be aware that as a project is developed, certain modifications and/or improvements to the original recommendation may be required. The CONSULTANT is to incorporate these refinements into the design and will consider this effort to be an anticipated and integral part of the work. This will not be a basis for any supplemental fee request(s).

The CONSULTANT shall demonstrate good project management practices while working on this project. These include communication with the COUNTY and others as necessary, management of time and resources, and documentation. The CONSULTANT shall set up and maintain throughout the design of the project a contract file in accordance to COUNTY procedures. It shall be the CONSULTANT's responsibility to utilize the very best engineering judgment, practices and principles possible during the prosecution of the work commissioned under this contract.

The COUNTY will provide contract administration and management services. Both the COUNTY and the DEPARTMENT will provide technical reviews of all work associated with the development and preparation of the contract plans. The COUNTY will provide job specific information and/or functions as outlined in this contract.

2 PROJECT DESCRIPTION

The CONSULTANT shall investigate the status of the projects and become familiar with concepts and commitments (typical sections, alignments, etc.) developed from prior studies. If a Preliminary Engineering Report is available from a prior or current PD&E study, the CONSULTANT shall use the approved concepts as a basis for the design unless otherwise directed by the COUNTY.

The CONSULTANT shall incorporate the following into the design of this facility:

2.1 Roadway

Plan Type: Plan/Profile.

Typical Section: Mainline: six-lane divided urban curb and gutter with 11' lanes, 4-foot bike lanes, 6-foot sidewalk both directions.

Limits: SR 434 from Interstate 4 to Rangeline Rd in Seminole County

Major Intersections/Interchanges: List all intersections/interchanges that will require additional plan sheets:

- Palm Springs Drive
- Rangeline Rd

Variations/Exceptions: None anticipated. If needed, the proper application letters will be developed.

2.2 Drainage

Refer to the Preliminary Engineering Report dated November 2001 prepared for the PD&E study for SR 434 from Montgomery Road to US 17/92.

2.3 Utility Coordination

Refer to the Preliminary Engineering Report dated November 2001 prepared for the PD&E study for SR 434 from Montgomery Road to US 17/92.

2.4 Permits

Refer to the Preliminary Engineering Report dated November 2001 prepared for the PD&E study for SR 434 from Montgomery Road to US 17/92.

2.5 Structures (N/A)

2.6 Signing and Pavement Markings

Striping and ground signs within project limits. No overhead or cantilever signs anticipated.

2.7 Signals

Intersections: New Mast Arm signals at the intersections of Raymond Ave, Tollgate Trail, Palm Springs Dr and Rangeline Rd.

Traffic Data Collection: Traffic counts for mainline and turning movement counts at Raymond Ave, Tollgate Trail, Palm Springs Dr and Rangeline Rd.

Traffic Studies: Design Traffic Study to include traffic projections, intersection lane geometry and queue length calculations.

2.8 Landscape Architecture

Planting Plans: Xeriscape landscaping in median and areas behind the sidewalk on State Road 434 from Interstate 4 to Rangeline Rd.

2.9 Survey

Design Survey: Full topographic survey for roadway corridor and pond sites

Right of Way Survey: Right of way maps according to FDOT procedures for the project corridor

2.10 Geotechnical

Standard Penetration Test Borings, Auger borings, field permeability tests and associated lab testing.

2.11 Project Schedule

Within ten (10) days after the Notice-To-Proceed, and prior to the CONSULTANT beginning work, the CONSULTANT shall provide a detailed project activity/event schedule for COUNTY and CONSULTANT activities required to meet the current COUNTY Production Date. The schedule shall be accompanied by an anticipated payout and fiscal progress curve. Additional specific scheduling requirements are:

The schedule shall indicate, at a minimum, submission dates for Phase I, II, III, and IV plans, right-of-way maps, and all other required submittals.

For purposes of scheduling, the CONSULTANT shall allow for the following COUNTY work activity and submittal review times:

Work Activity/Submittal Review (to be determined by COUNTY)	Time (weeks) (to be determined by COUNTY)
- Roadway Plans Review	4
- Right of Way Maps Review	
(Phase I, Phase II)	8
(Phase IV)	4
- Alternative Drainage Design Concept Report Review	4
- Pond Siting Report	4
- Environmental Permitting Packages Review	4
- Environmental Mitigation Plan Review	4
- Jurisdictional Determination Report Review	4
- Traffic Studies and Analysis Report Review	4
- Preparation of Right-of-Way Documents Activity	10
- Acquisition of Right-of-Way Activity	104
- Prepare/Execute Utility Agreements Activity	16
- Landscape Development Plan	4

Periodically, throughout the life of the project, the schedule and curves shall be reviewed and, with the approval of the COUNTY, adjusted as necessary to incorporate changes in the work concept and progress to date.

The approved schedule and schedule status report, along with progress and payout curves shall be submitted with the monthly progress report. Bi-weekly status reports should be emailed to the COUNTY project manager.

The schedule shall be submitted in Microsoft Project format.

2.12 Submittals

The CONSULTANT shall furnish plans and documents as required by the COUNTY to adequately control, coordinate, and approve the plans. The CONSULTANT shall distribute phase submittals as directed by the COUNTY.

The CONSULTANT shall provide copies of the required plans and documents as listed below. These are the anticipated printing requirements for the project. This tabulation will be used for estimating purposes, and the Project Manager will determine the specific number of copies required prior to each submittal.

Engineering Items:

	<u>No. of Copies Required</u>
▪ Roadway Design:	
○ Typical Section Package	1
○ Pavement Design Report	1
○ Design Documentation	1
○ Computation Book	2
○ Technical Special Provisions	2
○ Lane Closure Analysis Worksheets	2
▪ Drainage:	
○ Pond Siting Report: Final	2
○ Drainage Design Documentation Report	2
▪ Traffic Operations - Traffic Report	2
▪ Environmental Items	
○ Environmental Resource Permit Application Package	2
○ Mitigation Plan	2
○ Jurisdictional Determination Report	2
○ Coast Guard Navigation Permit Application Package (If applicable)	2
○ National Pollutant Discharge Elimination System (NPDES) Permit Application Package	5
▪ Design/Right-Of-Way Surveys	
○ Map and Plat Copies	2
○ Certified Right-of-Way Control Survey Drawings	2
○ Aerial Photograph Original Negatives	1
○ Rectified Aerial Raster Image (HMR Format)	1
○ 24"x36" Aerial Mylars (R/W Format)	1
▪ Geotechnical	
○ Roadway Report - Preliminary	2
○ Roadway Report - Final	2

2.13 Provisions for Work

All maps, plans and designs are to be prepared with English values in accordance with all applicable current COUNTY manuals, memorandums, and guidelines.

General	Florida Statutes Florida Administrative Codes Florida Department of Transportation Project Development and Environmental Manual Florida Department of Transportation Plans Preparation Manual Florida Department of Transportation Standard Specifications for Road and Bridge Construction
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General (continued)	<p>Florida Department of Transportation Handbook for Preparation of Specifications Package</p> <p>Florida Department of Transportation Design Standards for Design, Construction, Maintenance, and Utility Operations on the State Highway System</p> <p>Manual of Uniform Minimum Standards for Design, Construction, and Maintenance for Streets and Highways</p> <p>Bicycle Facilities Planning and Design Manual, Rev. Ed. 1982</p> <p>CADD Production Criteria Handbook</p> <p>CADD Manual</p> <p>Florida's Level of Service Standards and Guidelines Manual for Planning</p> <p>Equivalent Single Axle Load Guidelines</p> <p>Design Traffic Procedure</p> <p>K-Factor Estimation Process</p> <p>Project Traffic Forecasting Guidelines</p> <p>Florida Department of Transportation Basis of Estimates Manual</p> <p>Quality Assurance Guidelines</p> <p>Safety Standards</p> <p>Rule 61G17-6, F.A.C., Minimum Technical Standards for Professional Surveyors and Mappers</p> <p>Department of Environmental Protection Rules Governing Mean High Water and Jurisdictional Line Surveys</p> <p>Any special instructions from the DEPARTMENT</p> <p>Utility Accommodations Guidelines</p> <p>Policy for Geometric Design of Highways and Streets</p>
Permits	<p>Chapter 373, F.S.</p> <p>Bridge Permit Application Guide, COMDT PUB P16591.3B</p>
Drainage	<p>Drainage Manual</p> <p>Drainage Handbooks</p> <ul style="list-style-type: none"> ▪ Storm Drain ▪ Optional Pipe Materials ▪ Stormwater Management Facility ▪ Cross Drain ▪ Erosion and Sediment Control ▪ Hydrology
Survey	<p>Location Survey Manual</p> <p>Highway Field Survey Specifications</p> <p>Automated Survey Data Gathering</p> <p>Outline Specifications for Aerial Surveys and Photogrammetry for Transportation Projects</p> <p>Standards for Consultant-Submitted G.P.S. Static Control Projects</p> <p>EFB User Guide</p> <p>Chapter 472, F.S.</p> <p>Chapter 177, F.S.</p> <p>FDEP Bureau of Surveying and Mapping.</p>
Traffic Operation Manuals	<p>American Disabilities Act</p> <p>ASSHTO - Guide for Development of Bicycle Facilities</p> <p>Federal Highway Administration Standard Highway Signs Manual</p> <p>Florida Department of Transportation Traffic Engineering Manual</p> <p>Florida Department of Transportation Manual on Uniform Traffic Studies (MUTS)</p> <p>National Electrical Code</p> <p>National Electric Safety Code</p> <p>Minimum Specifications for Traffic Control Signal Devices</p> <p>Florida Department of Transportation - Florida Roundabout Guide</p> <p>FHWA - Roundabouts: An Informational Guide</p> <p>Florida Department of Transportation Median Handbook</p> <p>AASHTO - An Information Guide for Highway Lighting</p>
Mapping	<p>Right-of-Way Mapping</p> <p>Florida Department of Transportation Right-of-Way Handbook</p> <p>Florida Department of Transportation Right-of-Way Manual</p>
Geotechnical	<p>Soils and Foundation Handbook</p> <p>Manual of Florida Sampling and Testing Methods</p>
Landscape Architecture	<p>Florida Highway Landscape Guide</p>

2.14 Services to be Performed by the COUNTY and or FDOT

The COUNTY will provide those services and materials as set forth below:

- Provide pre-numbered survey books in which to record field data.
- Furnish standard COUNTY monuments for the bench line.
- Regarding Environmental Permitting Services:
 - Approve all contacts with environmental agencies
 - Provide general philosophies and guidelines of the COUNTY to be used in the fulfillment of this contract. Objectives, constraints, budgetary limitations and time constraints will be completely defined by the Project Manager.
 - FDOT will provide the appropriate signatures on application forms.
- Provide the appropriate letters of authorization designating the CONSULTANT as an agent of the COUNTY
- Provide phase reviews of roadway plans
- Furnish an approved Environmental Document when available
- All future information that may come to the COUNTY during the term of the CONSULTANT's Agreement and which in the opinion of the COUNTY is necessary to the prosecution of the work
- Furnish available traffic and planning data
- Furnish all approved utility relocations
- Provide project utility certification to the DEPARTMENT's Central Office
- Acquisition of any necessary title search
- Project data currently on file
- Engineering standards and review services
- All available information in the possession of the COUNTY pertaining to utility companies whose facilities may be affected by the proposed construction
- All future information that may come to the COUNTY pertaining to subdivision plans so that the CONSULTANT may take advantage of additional areas that can be utilized as part of the existing right-of-way
- Systems traffic for Projected Design Year, with K, D, and T factors
- Existing right-of-way maps
- Project Development and Environmental Documents

3 PROJECT GENERAL TASKS

3.1 Public Involvement

Public involvement is an important aspect of the project development process. Public involvement includes communicating to all interested persons, groups, and government organizations information regarding the development of the project. The CONSULTANT shall hold four (4) stakeholder meetings including graphics and handouts, one (1) public meeting including a formal presentation, and issue three (3) project newsletters. The CONSULTANT is responsible for developing and maintaining a current mailing list and for facilitating all meetings.

3.2 Joint Project Agreements

Includes all coordination, meetings, etc. required to include Joint Project Agreement (JPA) plans (prepared by others) in contract plans package including all necessary revisions/modifications to contract documents to ensure plans compatibility.

3.3 Contract Maintenance

Includes project management effort for complete setup and maintenance of files, developing monthly progress reports, schedule updates, work effort to develop and execute subconsultant agreements, etc.

3.4 Prime Project Manager Meetings

Includes Prime CONSULTANT Project Manager staff hours for phase review, progress review, all technical meetings, and other coordination activities, including any travel time. Meetings required for each Activity are included in the meetings section for that specific Activity.

PROJECT COMMON TASKS

These tasks are applicable to most activities of the project included in this Scope of Work as identified in Sections 4 through 31.

Cost Estimates: The CONSULTANT shall be responsible for producing a construction cost estimate and reviewing and updating the cost estimate if any scope changes occur and/or at milestone of the project. This estimate will be used to compare with the DEPARTMENT's Long Range Estimate (L.R.E.) for conformity and accuracy of the estimate. Changes to the L.R.E. inputs will be performed by the DEPARTMENT. A Summary of Pay Items sheet shall be prepared with the Phase II, III, and IV Plans.

Technical Special Provisions: The CONSULTANT shall provide Technical Special Provisions for all items of work not covered by the Standard Specifications for Road and Bridge Construction and recurring special provisions. The recurring special provisions and supplemental specifications are accessible on the DEPARTMENT's mainframe computer. Standard Specifications, recurring special provisions and supplemental specifications should not be modified unless absolutely necessary to control project specific requirements. The first nine sections of the standard specifications, recurring special provisions and supplemental specifications shall not be modified without written approval of the State Specifications Engineer. All modifications to other sections must be justified to the appropriate District Specifications Office to be included in the project's specifications package as Technical Special Provisions.

The Technical Special Provisions shall be technical in nature and shall provide a description of work, materials, equipment and specific requirements, method of measurement and basis of payment. These provisions shall be submitted on 8-1/2"x11" sheets and shall not have holes punched or be bound in any way that would create a problem for high volume reproduction.

The CONSULTANT shall contact the appropriate District Specifications Office for details of the current format to be used before starting preparations of Technical Special Provisions.

Field Reviews: Includes all trips required to obtain necessary data for all elements of the project.

Technical Meetings: Includes meetings with COUNTY and/or Agency staff, between disciplines and subconsultants, such as access management meetings, pavement design meetings, local governments, railroad companies, progress review meetings (phase review), and miscellaneous meetings.

Quality Assurance/Quality Control: It is the intention of the COUNTY that design CONSULTANTS are held responsible for their work, including plans review. Detailed checking of CONSULTANT plans or assisting in designing portions of the project for the CONSULTANT is not the intent of having external design consultants. The purpose of CONSULTANT plan reviews is to ensure that CONSULTANT plans follow the plan preparation procedures outlined in the Plans Preparation Manual, that state and federal design criteria are followed with the COUNTY concept, and that the CONSULTANT submittals are complete.

The CONSULTANT shall be responsible for the professional quality, technical accuracy and coordination of all surveys, designs, drawings, specifications and other services furnished by the CONSULTANT under this contract.

The CONSULTANT shall provide a Quality Control Plan that describes the procedures to be utilized to verify, independently check, and review all maps, design drawings, specifications, and other documentation prepared as a part of the contract. The CONSULTANT shall describe how the checking and review processes are to be documented to verify that the required procedures were followed. The Quality Control Plan may be one utilized by the CONSULTANT as part of their normal operation or it may be one specifically designed for this project. The CONSULTANT shall submit a Quality Control Plan for approval within 20 (twenty) calendar days of the written Notice to Proceed. A marked up set of prints from a Quality Control Review indicating the reviewers for each component (structures, roadway, drainage, signals, geotechnical, signing and marking, lighting, surveys, etc) and a written resolution of comments on a point by point basis will be required with each phase submittal. The responsible Professional Engineer, Landscape Architect or Professional Surveyor that performed the Quality Control review will sign a statement certifying that the review was conducted.

The CONSULTANT shall, without additional compensation, correct all errors or deficiencies in the designs, maps, drawings, specifications and/or other services.

Independent Peer Review: When directed by the COUNTY, a subconsultant shall perform Independent Peer Reviews.

Supervision: Includes all efforts required to supervise all technical design activities.

Coordination: Includes all efforts to coordinate with all disciplines of the project to produce a final set of construction documents.

4 ROADWAY ANALYSIS

The CONSULTANT shall analyze and document Roadway Tasks in accordance with all applicable manuals, guidelines, standards, handbooks, procedures, and current design memorandums.

4.1 Typical Section Package

The CONSULTANT shall provide an approved Typical Section Package prior to the Phase I submittal.

4.2 Pavement Design Package

The CONSULTANT shall provide an approved Pavement Design Package prior to the Phase II Plans submittal date.

4.3 Access Management

Memo to County detailing changes to approved access management plan.

4.4 Horizontal/Vertical Master Design Files

The CONSULTANT shall design the geometrics using the design standards that are most appropriate with proper consideration given to the design traffic volumes, design speed, capacity and levels of service, functional classification, adjacent land use, design consistency and driver expectancy, aesthetics, pedestrian and bicycle concerns, ADA requirements, elder road user policy, access management, PD&E documents and scope of work.

4.5 Cross Section Design Files

The CONSULTANT shall establish and develop cross section design files in accordance with the CADD manual.

4.6 Traffic Control Analysis

The CONSULTANT will prepare a Traffic Control Data Sheet (T.C.D.S.) for inclusion as part of the Roadway Plans. The intent of the T.C.D.S., as prepared by the CONSULTANT, is to provide adequate minimum requirements and direction to the construction contractor regarding specific project and construction plan conditions, and to enable the contractor to prepare a detailed maintenance of traffic plan for approval by the COUNTY prior to construction beginning.

The T.C.D.S. will explain the following:

- Recommended phasing intent
- Special construction techniques, methodologies, materials or sequencing of events
- Unusual or extraordinary typical section applications
- Unique traffic conditions or access requirements
- Other conditions known to the CONSULTANT that would positively or negatively affect the preparation of the detailed maintenance of traffic plan by the roadway contractor.

The T.C.D.S. will include as a minimum, the following:

- General Notes
- Graphical and written phasing typical sections
- Graphical and written description of requirements at intersections and major driveways within the project limits
- An erosion sediment control plan approved by SJRWMD for use throughout the different construction phases of the project. This document is also to be used in conjunction with the MOT plans.

4.7 Design Report

The CONSULTANT shall prepare all applicable report(s) as listed in the Project Description section of this scope.

The CONSULTANT shall submit to the COUNTY design notes, data, and calculations to document the design conclusions reached during the development of the contract plans.

The design notes, data, and computations shall be recorded on size 8-1/2"x11" sheets, fully titled, numbered, dated, indexed and signed by the designer and the checker. Computer output forms and other oversized sheets shall be folded to 8-1/2"x11" size. The data shall be in a hardback folder for submittal to the COUNTY.

4.8 Computation Book and Quantities

The CONSULTANT shall prepare the computation book and various summary of quantities sheets. This includes all efforts required to develop the computation book and the supporting documentation, including construction days when required.

4.9 Cost Estimate

4.10 Field Reviews

4.11 Technical Meetings

4.12 Quality Assurance/Quality Control

4.13 Supervision

4.14 Coordination

5 ROADWAY PLANS

The CONSULTANT shall prepare Roadway, Drainage, Traffic Control, Utility Adjustment Sheets, plan sheets, notes, and details. The plans shall include the following sheets necessary to convey the intent and scope of the project for the purposes of construction:

- 5.1 Key Sheet**
- 5.2 Summary of Pay Items Including Quantity Input**
- 5.3 Drainage Map**
- 5.4 Typical Section Sheets**
- 5.5 General Notes/Pay Item Notes**
- 5.6 Summary of Quantities**
- 5.7 Bridge Hydraulics Recommendation Sheets (N/A)**
- 5.8 Summary of Drainage Structures**
- 5.9 Project Layout**
- 5.10 Plan/Profile Sheet**
- 5.11 Special Profile**
- 5.12 Back of Sidewalk Profile Sheet**
- 5.13 Ramp Terminal Details (Plan View)**
- 5.14 Intersection Layout Details**
- 5.15 Miscellaneous Detail Sheets**
- 5.16 Drainage Structure Sheet**
- 5.17 Miscellaneous Drainage Detail Sheets**
- 5.18 Retention/Detention Ponds Detail Sheet**
- 5.19 Retention Pond Cross Sections**
- 5.20 Roadway Soil Survey Sheet**
- 5.21 Cross Sections**
- 5.22 Traffic Control Data Sheet**
- 5.23 Utility Adjustment Sheets**
- 5.24 Erosion Control Plan**
- 5.25 SWPPP**

- 5.26 Project Control Network Sheet
- 5.27 Utility Verification Sheet (SUE Data)
- 5.28 Quality Assurance/Quality Control
- 5.29 Supervision

6 DRAINAGE ANALYSIS

The CONSULTANT shall analyze and document Drainage Tasks in accordance with all applicable Manuals, guidelines, standards, handbooks, procedures, and current design memorandums.

The CONSULTANT shall be responsible for designing a drainage and stormwater management system. All design work shall comply with the requirements of the appropriate regulatory agencies and the DEPARTMENT's Drainage Manual.

Coordinate fully with the appropriate permitting agencies and the COUNTY's staff. All activities and submittals should be coordinated through the COUNTY's Project Manager. The work will include the engineering analyses for any or all of the following.

6.1 Determine Base Clearance Water Elevation

Analyze, determine and document high water elevations which will be used to set roadway profile grade. Determine surface water elevations at cross drains, floodplains, outfalls and adjacent stormwater ponds. Determine groundwater elevations at intervals between the above mentioned surface waters.

6.2 Pond Siting Analysis and Report

Evaluate pond sites using a preliminary hydrologic analysis. Document the results and coordination for all of the project's pond site analyses. The Drainage Manual provides specific documentation requirements.

6.3 Design of Outfalls

Analyze and document the design of ditch or piped outfalls.

6.4 Design of Stormwater Management Facility (Offsite Pond)

Design stormwater management facilities to meet requirements for stormwater quality treatment and attenuation. Develop proposed pond layout (shape, contours, slopes, etc.), do routing calculations, and design the outlet control structure.

6.5 Design of Storm Drains

Develop a "working drainage map," determine runoff, inlet locations, and spread. Calculate hydraulic losses (friction, utility conflict and, if necessary, minor losses). Determine Design Tailwater and, if necessary, outlet scour protection.

6.6 Optional Culvert Material

Determine acceptable options for pipe materials.

6.7 French Drain Design

Design French Drain Systems to provide stormwater treatment and attenuation. Identify location for percolation tests and review these, determine the size and length of French Drains, design the control structure/weir, and model the system of inlets, conveyances, French Drains, and other outfalls using a routing program such as ICPR.

6.8 Drainage Design Documentation Report

Compile drainage design documentation into report format. Include documentation for all the drainage design tasks and associated meetings and decisions, except the Pond Siting Analyses and Report and Bridge Hydraulics Report.

6.9 Bridge Hydraulic Report

Calculate hydrology, hydraulics, scour, and deck drainage. Prepare report and the information for the Bridge Hydraulics Recommendation Sheet.

6.10 Cost Estimate

6.11 Technical Special Provisions

6.12 Field Reviews

6.13 Technical Meetings

6.14 Quality Assurance/Quality Control

6.15 Supervision

6.16 Coordination

7 UTILITIES

The CONSULTANT shall identify utility facilities and secure agreements, utility work schedules, and plans from the Utility Agency Owners (UAO) ensuring no conflicts exist between utility facilities and the COUNTY's construction project.

7.1 Identify Existing UAO(s)

Identify all utilities in the corridor; check with Maintenance for Permits, Sunshine State One Call, Subsurface Utility Engineering (SUE) Report, Design Location Survey, and Existing Plans.

7.2 Make Utility Contacts

First Contact: Send letters and two sets of plans to each utility, one set for the utility office, one set each to construction and maintenance if required. Includes contact by phone for meeting coordination. Request type, size, location, easements, cost for compensable relocation, and justification for any utility exceptions. Include the meeting schedule (if applicable) and the design schedule. Include typical meeting agenda.

Second Contact: At a minimum of 4 weeks prior to the meeting, the CONSULTANT shall transmit two complete sets of Phase II plans to each UAO having facilities located within the project limits, and one set to the COUNTY Offices as required by the District.

Third Contact: Assemble packages. Send letters and two sets of plans to the UAO(s) including all component sets, one set for the utility office, one set to construction and maintenance if required. Include the design schedule. Not all projects will have all contacts as described above.

7.3 Preliminary Utility Meeting

The CONSULTANT shall schedule (time and place), notify participants, and conduct a preliminary utility meeting with all affected UAO(s) for the purpose of presenting the project, review the current design schedule, evaluate the utility information collected, provide follow-up information on compensable interest requests, discuss the utility work by highway contractor option with each utility, and discuss any future design issues that may impact utilities. This is also an opportunity for the UAO(s) to present proposed facilities. The CONSULTANT shall keep accurate minutes and distribute a copy to all attendees.

7.4 Individual/Field Meetings

The CONSULTANT shall meet with each UAO separately throughout the project design duration to provide guidance in the interpretation of plans, review changes to the plans and schedules, optional clearing and grubbing work, and assist in the development of the UAO(s) plans and work schedules. The CONSULTANT is responsible for motivating the UAO to complete and return the necessary documents after each Utility Contact or Meeting.

7.5 Collect and Review Plans and Data from UAO(s)

Ensure information (utility type, material and size) is sent to the designer for inclusion in the plans.

7.6 Utility Design Meeting

At a minimum of 3 weeks prior to the meeting, the CONSULTANT shall transmit two complete sets of Phase II plans to each UAO having facilities located within the project limits, and one set to the COUNTY Offices as required by the District. The CONSULTANT shall schedule (time and place), notify participants, and conduct a Utility meeting with all affected UAO(s). The CONSULTANT shall be prepared to discuss drainage, traffic signalization, maintenance of traffic (construction phasing), review the current design schedule and letting date, evaluate the utility information collected, provide follow-up information on compensable interest requests, discuss the utility work by highway contractor option with each utility, discuss any future design issues that may impact utilities, etc., to the extent that they may have an effect on existing or proposed utility facilities with particular emphasis on drainage and maintenance of traffic with each UAO. The intent of this meeting shall be to identify and resolve conflicts between utilities and proposed construction prior to completion of the plans, including utility adjustment details. Also recommend resolution between known utility conflicts with proposed construction plans as practical. The CONSULTANT shall keep accurate minutes of all meetings and distribute a copy to all attendees.

7.7 Review Utility Markups

Review utility marked up plans individually as they are received for content and coordinate review with the designer.

7.8 Utility Coordination/Follow-up

This includes follow-up, interpreting plans, and assisting and the completion of the UAO(s) work schedule and agreements. Includes phone calls, face-to-face meetings, etc., to motivate and ensure the UAO(s) complete and return the required documents in accordance with the project schedule. Ensure the resolution of all known conflicts. This task can be applied to all phases of the project.

7.9 Utility Constructability Review

Review utility schedules against construction contract time, and phasing for compatibility. Coordinate with construction office.

8 ENVIRONMENTAL PERMITS

The CONSULTANT shall notify the COUNTY Project Manager, Environmental Permit Coordinator and other appropriate personnel in advance of all scheduled meetings with the regulatory agencies to allow a COUNTY representative to attend. The CONSULTANT shall copy in the Project Manager and the Environmental Permit Coordinator on all permit related correspondence and meetings.

8.1 Preliminary Project Research

The CONSULTANT shall perform preliminary project research and shall be responsible for early identification of and coordination with the appropriate regulatory agencies to assure that design efforts are properly directed toward permit requirements.

8.2 Complete Permit Involvement Form

The CONSULTANT shall document permit involvement in coordination with the District Permit Coordinator and COUNTY Project Manager. To be done upon completion of preliminary project research.

8.3 Establish Wetland Jurisdictional Lines

The CONSULTANT shall collect all data and information necessary to determine the boundaries of wetlands and surface waters defined by the rules or regulations of each agency processing or reviewing a permit application necessary to construct a COUNTY project.

The CONSULTANT shall be responsible for but not limited to the following activities:

- Determine landward extent of state waters as defined in Chapter 62-340 FAC as ratified in Section 373.4211 FS
- Determine the jurisdictional boundaries of wetlands and surface waters as defined by rules or regulations of any other permitting authority that is processing a COUNTY permit application.
- Prepare aerial maps showing the jurisdictional boundaries of wetlands and surface waters. Aerial maps shall be reproducible, of a scale no greater than 1"=200' and be recent photography. The maps shall show the jurisdictional limits of each agency. Xerox copies of aerials are not acceptable. All jurisdictional boundaries are to be tied to the project's baseline of survey. When necessary, jurisdictional maps shall be signed and sealed by either a Registered Professional Engineer or a Registered Land Surveyor.
- Acquire written verification of jurisdictional lines from the appropriate environmental agencies.
- Prepare a written assessment of the current condition and relative value of the function being performed by wetlands and surface waters. Prepare data in tabular form which includes ID number for each wetland impacted, size of wetland to be impacted, type of impact and identify any wetland within the project limits that will not be impacted by the project.

8.4 Agency Verification of Wetland Data

The CONSULTANT shall be responsible for verification of wetland data identified in Section 8.3 and coordinating regulatory agency field reviews, including finalization of wetland assessments with applicable agencies.

8.5 Complete and Submit All Required Permit Applications

The CONSULTANT shall prepare permit packages as identified in the Project Description section.

The CONSULTANT shall collect all of the data and information necessary to obtain the environmental permits required to construct a project.

The CONSULTANT shall prepare each permit application for COUNTY approval in accordance with the rules and/or regulations of the environmental agency responsible for issuing a specific permit and/or authorization to perform work.

- 8.6 Prepare Dredge and Fill Sketches
- 8.7 Prepare USCG Permit Sketches
- 8.8 Prepare Easement Sketches
- 8.9 Prepare Right-of-Way Occupancy Sketches
- 8.10 Prepare Coastal Construction Control Line (CCCL) Permit Sketches
- 8.11 Prepare Tree Permit Information
- 8.12 Mitigation Coordination and Meetings

The CONSULTANT shall coordinate with COUNTY personnel prior to approaching any environmental permitting or reviewing agencies. Once a mitigation plan has been reviewed and approved by the COUNTY, the CONSULTANT will be responsible for coordinating the proposed mitigation plan with the environmental agencies.

8.13 Mitigation Design

If wetland impacts cannot be avoided, the CONSULTANT shall prepare a mitigation plan to be included as a part of the Environmental Resource or Wetlands Resource Permit applications.

Prior to the development of alternatives, the CONSULTANT shall meet with the Project Manager to determine the COUNTY's policies in proposing mitigation. The CONSULTANT shall proceed in the development of a mitigation plan based upon the general guidelines provided by the COUNTY.

The CONSULTANT will be directed by the COUNTY to investigate the following methods of mitigation:

- Payment to DEP/WMD per acre of wetlands impacted as defined in CH 373.4137 FS
- Monetary participation in offsite regional mitigation plans
- Monetary participation in a private mitigation bank
- Creation/restoration on public lands
- Creation/restoration on right-of-way purchased by the COUNTY
- Creation/restoration on existing COUNTY right-of-way

In the event that physical creation or restoration is the only feasible alternative to offset wetland impacts, the CONSULTANT shall collect all of the data and information necessary to prepare alternative mitigation plans that be acceptable to all permitting agencies and commenting agencies who are processing or reviewing a permit application for a COUNTY project.

Prior to selection of a final mitigation site, the CONSULTANT will provide the following services in the development of alternative mitigation plans.

- Preliminary jurisdictional determination for each proposed site
- Selection of alternative sites
- Coordination of alternative sites with the COUNTY/all environmental agencies
- Written narrative listing potential sites with justifications for both non-recommended

8.14 Environmental Clearances

The CONSULTANT shall prepare clearances for all pond and/or mitigation sites identified after the PD&E was completed.

Archaeological and Historical Features: The CONSULTANT shall collect data necessary to completely analyze the impacts to all cultural and historic resources by the pond and/or mitigation sites and prepare a Cultural Resource Assessment Request Package.

Wetland Impact Analysis: The CONSULTANT shall analyze the impacts to wetlands for the pond and/or mitigation sites and complete the Wetlands Evaluation Report.

Wildlife and Habitat Impact Analysis: The CONSULTANT shall collect data necessary to perform an Endangered Species Biological Assessment, and analyze the impacts to wildlife and habitat by the pond and/or mitigation sites.

Contamination Impact Analysis: The CONSULTANT shall perform the necessary analysis to complete the Contamination Screening Evaluation for the pond and/or mitigation sites and complete the Contamination Screening Evaluation Report.

8.15 Technical Meetings

8.16 Quality Assurance/Quality Control

8.17 Supervision

8.18 Coordination

9 STRUCTURES - SUMMARY AND MISCELLANEOUS TASKS AND DRAWINGS (N/A)

10 STRUCTURES - BRIDGE CONCEPT REPORT (N/A)

11 STRUCTURES - MEDIUM SPAN CONCRETE BRIDGE (N/A)

12 STRUCTURES - MISCELLANEOUS

MAST ARMS

12.1 Mast Arms

Mast arms to be designed per Seminole County Standard Mast Arm Drawings

13 SIGNING AND PAVEMENT MARKING ANALYSIS

The CONSULTANT shall analyze and document Signing and Pavement Markings Tasks in accordance with all applicable manuals, guidelines, standards, handbooks, procedures, and current design memorandums.

13.1 Reference and Master Design File

The CONSULTANT shall prepare the Signing & Marking Design file to include all necessary design elements and all associated reference files.

13.2 Multi-Post Sign Support Calculations

The CONSULTANT shall determine the appropriate column size from the DEPARTMENT's Multi-Post Sign Program.

13.3 Sign Panel Design Analysis

Establish sign layout, letter size and series for non-standard signs.

13.4 Quantities

13.5 Computation Book

13.6 Cost Estimates

13.7 Technical Special Provisions

13.8 Field Reviews

13.9 Technical Meetings

13.10 Quality Assurance/Quality Control

13.11 Supervision

13.12 Coordination

14 SIGNING AND PAVEMENT MARKING PLANS

The CONSULTANT shall prepare a set of Signing and Pavement Marking Plans in accordance with the Plans Preparation Manual that includes the following:

14.1 Key Sheet

14.2 Tabulation of Quantities

14.3 General Notes/Pay Item Notes

14.4 Plan Sheet

14.5 Typical Details

14.6 Guide Sign Work Sheet(s)

14.7 Interim Standards

14.8 Quality Assurance/Quality Control

14.9 Supervision

Overhead Sign Structure Sheet and Soil Boring Sheet are prepared in other activities of this scope.

15 SIGNALIZATION ANALYSIS

The CONSULTANT shall analyze and document Signalization Analysis Tasks in accordance with all applicable manuals, guidelines, standards, handbooks, procedures, and current design memorandums.

15.1 Traffic Data Collection

The CONSULTANT shall perform all effort required for traffic data collection, including traffic counts for mainline and turning movement counts at Raymond Ave, Tollgate Trail, Palm Springs Dr and Rangeline Rd intersections.

15.2 Traffic Data Analysis

The CONSULTANT shall conduct a Design Traffic Study to include traffic projections, intersection lane geometry, and queue length calculations, and to determine signal operation plan and local signal timings.

15.3 Reference and Master Signalization Design File

The CONSULTANT shall prepare the Signalization Design file to include all necessary design elements and all associated reference files.

15.4 Overhead Street Name Sign Design

The CONSULTANT shall design Signal Mounted Overhead Street Name signs.

15.5 Pole Elevation Analysis

15.6 Quantities

15.7 Cost Estimate

15.8 Technical Special Provisions

15.9 Field Reviews

The CONSULTANT shall collect information from the maintaining agencies and conduct a field review. The review should include but is not limited to the following:

- Existing Signal and Pedestrian Phasing
- Controller Make, Model, Capabilities and Condition/Age
- Condition of Signal Structure(s)
- Type of Detection as Compared With Current District Standards
- Interconnect Media
- Controller Timing Data

15.10 Technical Meetings

15.11 Quality Assurance/Quality Control

15.12 Supervision

15.13 Coordination

16 SIGNALIZATION PLANS

The CONSULTANT shall prepare a set of Signalization Plans in accordance with the Plans Preparation Manual, which includes the following:

- 16.1 Key Sheet
- 16.2 Tabulation of Quantities
- 16.3 General Notes/Pay Item Notes
- 16.4 Plan Sheet
- 16.5 Interconnect Plans
- 16.6 Traffic Monitoring Site
- 16.7 Guide Sign Worksheet
- 16.8 Special Details
- 16.9 Special Service Point Details
- 16.10 Mast Arm Tabulation Sheet
- 16.11 Quality Assurance/Quality Control
- 16.12 Supervision

Signal Structure Sheet and Soil Boring Sheet are prepared in other activities of this scope.

17 LANDSCAPE ARCHITECTURE ANALYSIS

The CONSULTANT shall analyze and document Landscape Architecture Tasks in accordance with all applicable manuals, guidelines, standards, handbooks, procedures, and current design memorandums.

17.1 Data Collection

All research required to collect data necessary to complete the initial design analysis. This includes identifying local ordinances and collection of other project data.

17.2 Site Inventory and Analysis

This includes identification of opportunities and constraints for the proposed project based on existing site conditions. Summary of analysis, if required, is included in conceptual design.

17.3 Planting Design

Conceptual Design: Includes delineation of all proposed planting types, scheme development and preliminary costs, and areas and reports. The design shall be submitted with the Phase I plans.

Final Design: Includes identifying the species/type, size, location, spacing, and quality of all plants.

17.4 Computation Book and Quantities

17.5 Cost Estimates

- 17.6 Technical Special Provisions
- 17.7 Field Reviews
- 17.8 Technical Meetings
- 17.9 Quality Assurance/Quality Control
- 17.10 Supervision
- 17.11 Coordination

18 LANDSCAPE ARCHITECTURE PLANS

The CONSULTANT shall prepare a set of Landscape Plans which includes the following:

- 18.1 Key Sheet
- 18.2 Tabulation of Quantities
- 18.3 General Notes
- 18.4 Tree and Vegetation Inventory, Protection and Relocation Plans
- 18.5 Planting Plans for Linear Roadway Projects
- 18.6 Planting Details and Notes
- 18.7 Cost Estimate
- 18.8 Quality Assurance/Quality Control
- 18.9 Supervision

TECHNICAL MAINTENANCE PLAN

Written or graphic guide for care of the plantings, irrigation system and hardscape maintenance after the warranty period. Maintenance details and specifications shall recommend: a mowing schedule and maintained grass height; fertilization schedules, formulas, rates and methods of application; weeding schedule and method chemical, mechanical, or manual; edging schedule; herbicide schedules formulas, rates, methods of application, precautions; pruning schedule and methods to maintain health and clear sight requirements; mulching materials, thickness and replacement frequency; irrigation schedule and warranty period maintenance (flushing, adjustments, clean-up); litter pick-up; and hardscape care. This Maintenance Plan will be developed in coordination with the local government entity who assumes the maintenance obligation.”

19 SURVEY

The CONSULTANT shall perform survey tasks in accordance with all applicable statutes, manuals, guidelines, standards, handbooks, procedures, and current design memoranda.

The CONSULTANT shall submit all survey notes and computations to document the surveys. All field survey work shall be recorded in approved media and submitted to the COUNTY. Field books submitted to the COUNTY must be of an approved type. The field books shall be certified by the surveyor in responsible charge of work being performed before the final product is submitted.

The survey notes shall include documentation of decisions reached from meetings, telephone conversations or site visits. All like work (such as bench lines, reference points, etc.) shall be recorded contiguously. The COUNTY may not accept field survey radial locations of section corners, platted subdivision lot and block corners, alignment control points, alignment control reference points and certified section corner references. The COUNTY may instead require that these points be surveyed by true line, traverse or parallel offset.

19.1 Horizontal Project Network Control (HPNC)

Establish or recover HPNC, for the purpose of establishing horizontal control on the Florida State Plane Coordinate System or datum approved by the District Location Surveyor (DLS); may include primary or secondary control points. Includes analysis and processing of all field collected data, and preparation of forms.

19.2 Vertical Project Network Control (VPNC)

Establish or recover VPNC, for the purpose of establishing vertical control on datum approved by the District Location Surveyor (DLS); may include primary or secondary vertical control points. Includes analysis and processing of all field collected data, and preparation of forms

19.3 Alignment and/or Existing Right of Way Lines

Establish, recover or re-establish project alignment. Also includes analysis and processing of all field collected data, existing maps, and/or reports for identifying mainline, ramp, offset, or secondary alignments. Depict alignment and/or existing R/W lines (in required format) per COUNTY R/W Maps, platted or dedicated rights of way.

19.4 Aerial Targets

Place, locate, and maintain required aerial targets and/or photo identifiable points. Includes analysis and processing of all field collected data, existing maps, and/or reports.

19.5 Reference Points

Reference HPNC points, project alignment, vertical control points, section, ¼ section, center of section corners and G.L.O. corners as required

19.6 Topography (2D)

Locate all above ground features and improvements. Deliver in appropriate electronic format. Effort includes field edits, analysis and processing of all field collected data, existing maps, and/or reports

19.7 Digital Terrain Model (DTM)

Locate all above ground features and improvements for the limits of the project by collecting the required data for the purpose of creating a DTM with sufficient density. Shoot all break lines, high and low points. Effort includes field edits, analysis and processing of all field collected data, existing maps, and/or reports

19.8 Roadway Cross Sections/Profiles

Perform field survey check sections or profiles to verify the required accuracy of the digital terrain model and/or to determine existing cross slope. Includes analysis and processing of all field collected data for comparison with DTM.

19.9 Side Street Surveys

Refer to tasks of this document as applicable.

19.10 Underground Utilities

Designation includes 2-dimensional collection of existing utilities and selected 3-dimensional verification as needed for designation. Location includes non-destructive excavation to determine size, type and location of existing utility, as necessary for final 3-dimensional verification. Survey includes collection of data on points as needed for designates and locates. Includes analysis and processing of all field collected data, and delivery of all appropriate electronic files.

19.11 Outfall Survey

Locate all above ground features and improvements for the limits of the project by collecting the required data for the purpose of a D.T.M. Survey with sufficient density of shots. Shoot all break lines, high and low points. Includes field edits, analysis and processing of all field collected data, existing maps, and/or reports.

19.12 Drainage Survey

Locate underground data (XYZ, pipe size, type, condition and flow line) that relates to above ground data. Includes field edits, analysis and processing of all field collected data, existing maps, and/or reports

19.13 Bridge Survey (N/A)

Locate required above ground features and improvements for the limits of the bridge. Includes field edits, analysis and processing of all field collected data, existing maps, and/or reports.

19.14 Channel Survey

Locate all topographic features and improvements for the limits of the project by collecting the required data for the purpose of a D.E.M. Survey with sufficient density of shots. Shoot all break lines, high and low points. Includes field edits, analysis and processing of all field collected data, maps, and/or reports.

19.15 Pond Site Survey

Refer to tasks of this document as applicable.

19.16 Mitigation Survey

Refer to tasks of this document as applicable.

19.17 Jurisdiction Line Survey

Perform field location (2-dimensional) of jurisdiction limits as defined by respective authorities, also includes field edits, analysis and processing of all field collected data, preparation of reports.

19.18 Geotechnical Support

Perform 3-dimensional (X,Y,Z) field location, or stakeout, of boring sites established by geotechnical engineer. Includes field edits, analysis and processing of all field collected data and/or reports.

19.19 Sectional/Grant Survey

Perform field location/placement of section corners, 1/4 section corners, and fractional corners where pertinent. Includes analysis and processing of all field-collected data and/or reports.

19.20 Subdivision Location

Survey all existing recorded subdivision/condominium boundaries, tracts, units, phases, blocks, street R/W lines, common areas. Includes analysis and processing of all field collected data and/or reports. If unrecorded subdivision is on file in the public records of the subject county, tie existing monumentation of the beginning and end of unrecorded subdivision.

19.21 Maintained R/W

Perform field location (2-dimensional) of maintained R/W limits as defined by respective authorities, if needed. Also includes field edits, analysis and processing of all field collected data, preparation of reports.

19.22 Boundary Survey

Perform boundary survey as defined by COUNTY standards. Includes analysis and processing of all field collected data, preparation of reports.

19.23 Water Boundary Survey

Perform Mean High Water, Ordinary High Water and Safe Upland Line surveys as required by COUNTY standards.

19.24 Right of Way Staking

Perform field staking and calculations of existing/proposed R/W lines for on-site review purposes.

19.25 Right of Way Monumentation

Set R/W monumentation as depicted on final R/W maps for corridor and water retention areas.

19.26 Line Cutting

Perform all efforts required to clear vegetation from the line of sight.

19.27 Work Zone Safety

Provide work zone as required by COUNTY standards.

19.28 Miscellaneous Surveys

Refer to tasks of this document, as applicable, to perform surveys not described herein.

19.29 Supplemental Surveys

Supplemental survey days and hours are to be approved in advance by DLS. Refer to tasks of this document, as applicable, to perform surveys not described herein.

19.30 Document Research

Perform research of documentation to support field and office efforts involving surveying and mapping.

19.31 Field Review

Perform verification of the field conditions as related to the collected survey data.

19.32 Technical Meetings

Attend meetings as required and negotiated by the Surveying and Mapping Department.

19.33 Quality Control/Quality Assurance

Establish and implement a QAQC plan. Also includes subconsultant review, response to comments and any resolution meetings if required, preparation of submittals for review, etc.

19.34 Supervision

Perform all activities required to supervise and coordinate project. These activities must be performed by the project supervisor, a Florida Professional Surveyor.

19.35 Coordination

20 RIGHT OF WAY MAPPING

20.1 Alignment

This includes final alignment survey map of the mainline SR 434 and major side streets.

20.2 Section and 1/4 Section Lines

This includes mapping of section line on key map and detail sheets.

20.3 Subdivisions

This includes field reconnaissance tasks, field retracement tasks, field traverse tasks computations for ten (10) subdivision plats adjoining the project corridor.

20.4 Existing Right-of way

Includes mapping for existing mainline, sixteen (16) side street Rights-of-Way and two (2) Trail Rights-of-Way.

20.5 Topography

Import graphics into master CAD file. Adjust and modify as needed for clear graphic representation.

20.6 Parent Tract Properties / Existing Easements

Map parent tracts for acquisition parcels and plot all easements revealed in the title search.

20.7 Proposed R/W Requirements

Map and dimension all proposed R/W Acquisition Parcels and Remainders.

20.8 Limits of Construction

Import into master CAD file, resolve problem areas with designer and edit as needed for clear graphic representation.

20.9 Jurisdictional / Agency Lines

This project lies within both the City of Longwood and Unincorporated Seminole County. These lines will be defined and mapped.

20.10 Control Survey Cover Sheet

Prepare a cover sheet in Department approved format.

20.11 Control Survey Key Sheet

20.12 Control Survey Detail Sheet

Prepare five (5) detail sheets at 1"=40'.

20.13 Right-of-Way Map Cover Sheet

Prepare a cover sheet in Department approved format.

20.14 Right-of-Way Map Key Sheet

Copy and modify the Control Survey key sheet.

20.15 Right-of-Way Map Detail Sheet

Copy and modify the five (5) Control Survey detail sheets at 1"=40'. Two (2) additional sheets will be reserved for WRA sites if needed.

20.16 Reference Point Sheet

20.17 Table of Ownerships Sheet

20.18 TITF Sketches

20.19 Title Search Map

Prepare map showing all required parcels necessary to be title searched. This map will use Seminole County Tax Assessors Maps as its base.

20.20 Title Search Report

20.21 Legal Descriptions

This includes the preparation of Descriptions as required for Parcel or Easement Acquisition.

20.22 Final maps / Plans Comparison

Review construction plans to insure acquisition limits are consistent between them and the R/W Maps.

20.23 Field Reviews

Field inspect Topography prior to final R/W mapping submittal to insure that no additional improvements have been constructed and that all pertinent items shown on the master topography file have been illustrated thereon.

20.24 Technical Meetings

Includes meetings with Consultant, County and Department staff members to review or discuss project needs.

20.25 Quality Assurance / Quality Control

Includes QA / QC reviews of maps prior to stage submittals.

20.26 Supervision

Includes office staff supervision throughout the project mapping phases.

20.27 Coordination

Includes coordination with the Consultant, County

21 GEOTECHNICAL

The CONSULTANT shall, for each project, be responsible for a complete geotechnical investigation. All work performed by the CONSULTANT shall be in accordance with COUNTY standards, or as otherwise directed by the District Geotechnical Engineer. The District Geotechnical Engineer will make interpretations and changes regarding geotechnical standards, policies and procedures and provide guidance to the CONSULTANT.

Prior to beginning each phase of investigation and after the Notice to Proceed is given, the CONSULTANT shall submit investigation plan for approval and meet with the COUNTY's Geotechnical Engineer or representative to review the project scope and COUNTY requirements. The investigation plan shall include, but not be limited to the proposed boring locations and depths, and all existing geotechnical information from available sources to generally describe the surface and subsurface conditions of the project site. Additional meetings may be required to plan any additional field efforts, review plans, resolve plans/report comments, resolve responses to comments, and/or any other meetings necessary to facilitate the project.

The CONSULTANT shall notify the COUNTY in adequate time to schedule a representative to attend all related meetings and field activities.

21.1 Document Collection and Review

CONSULTANT will review printed literature including topographic maps, county agricultural maps, aerial photography (including historic photos), ground water resources, geology bulletins, potentiometric maps, pile driving records, historic construction records and other geotechnical related resources. Prior to field reconnaissance, CONSULTANT shall review U.S.G.S., S.C.S. and potentiometric maps, and identify areas with problematic soil and groundwater conditions.

ROADWAY

The CONSULTANT shall be responsible for coordination of all geotechnical related fieldwork activities. The CONSULTANT shall retain all samples until acceptance of Phase IV plans. Rock cores shall be retained as directed in writing by the District Geotechnical Engineer.

Obtain pavement cores as directed in writing by the District Geotechnical Engineer.

If required by the District Geotechnical Engineer, a preliminary roadway exploration shall be performed before the Phase I plans submittal. The preliminary roadway exploration will be performed and results provided to the Engineer of Record to assist in setting roadway grades and locating potential problem areas. The preliminary roadway exploration shall be performed as directed in writing by the District Geotechnical Engineer.

CONSULTANT shall perform specialized field-testing as required by project needs and as directed in writing by the District Geotechnical Engineer.

All laboratory testing and classification will be performed in accordance with applicable COUNTY standards, ASTM Standards or AASHTO Standards, unless otherwise specified in the Contract Documents.

21.2 Detailed Boring Location Plan

Develop a detailed boring location plan. Meet with COUNTY Geotechnical Project Manager for boring plan approval. If the drilling program expects to encounter artesian conditions, the CONSULTANT shall submit a methodology(s) for plugging the borehole to the COUNTY for approval prior to commencing with the boring program.

21.3 Stake Borings/Utility Clearance

Stake borings and obtain utility clearance.

21.4 MOT Plans for Field Investigation

Coordinate and develop Maintenance of Traffic (MOT) plan. All work zone traffic control will be performed in accordance with the DEPARTMENT's Roadway and Traffic Design Standards Index 600 series.

21.5 Drilling Access Permits

Obtain all State, County, City, and Water Management District permits for performing geotechnical borings, as needed.

21.6 Property Clearances

Notify property tenants in person of drilling and field activities, if applicable. Written notification to property owners/tenants is the responsibility of the COUNTY's Project Manager.

21.7 Groundwater Monitoring

Monitor groundwater, using piezometers.

21.8 LBR Sampling

Collect appropriate samples for Limerock Bearing Ratio (LBR) testing.

21.9 Coordination of Field Work

Coordinate all field work required to provide geotechnical data for the project.

21.10 Soil and Rock Classification - Roadway

Refine soil profiles recorded in the field, based on results of laboratory testing.

21.11 Design LBR

Determine design LBR values from the 90% and mean methods.

21.12 Laboratory Data

Tabulate laboratory test results for inclusion in the geotechnical report, the report of tests sheet (Roadway Soil Survey Sheet), and for any necessary calculations and analyses.

21.13 Seasonal High Water Table

Review the encountered ground water levels and estimate seasonal high ground water levels. Estimate seasonal low ground water levels, if requested.

21.14 Parameters for Water Retention Areas

Calculate parameters for water retention areas, exfiltration trenches, and/or swales.

21.15 Limits of Unsuitable Material

Delineate limits of unsuitable material(s) in both horizontal and vertical directions. Assist the Engineer of Record with detailing these limits on the cross-sections. If requested, prepare a plan view of the limits of unsuitable material.

Assist the Engineer of Record in determining the limits of required subsoil excavation.

21.16 ASCII Files for Cross-Sections

Create ASCII files of boring data for cross-sections.

21.17 Embankment Settlement and Stability

Estimate the total magnitude and time rate of embankment settlements. Calculate the factor of safety against slope stability failure.

21.18 Stormwater Volume Recovery and/or Background Seepage Analysis

Perform stormwater volume recovery analysis as directed by the COUNTY.

21.19 Geotechnical Recommendations

Provide geotechnical recommendations regarding the proposed roadway construction project including the following: description of the site/alignment, design recommendations and discussion of any special considerations (i.e. removal of unsuitable material, consolidation of weak soils, estimated settlement time/amount, groundwater control, high groundwater conditions relative to pavement base, etc.) Evaluate and recommend types of geosynthetics and properties for various applications, as required.

21.20 Preliminary Report

If a preliminary roadway investigation is performed, a preliminary roadway report shall be submitted before the Phase I plans submittal. The purpose of the preliminary roadway report will be to assist in setting road grades and locating potential problems.

- Copies of U.S.G.S. and S.C.S. maps with project limits shown
- A report of tests sheet that summarizes the laboratory test results, the soil stratification (i.e. soils grouped into layers of similar materials) and construction recommendations relative to Standard Indices 500 and 505
- Results of all tasks discussed in the previous section (Data Interpretation and Analysis).
- An appendix that contains stratified soil boring profiles, laboratory test data sheets, sample embankment settlement and stability calculations, design LBR calculation/graphs, and other pertinent calculations.
- The CONSULTANT will respond in writing to any changes and/or comments from the COUNTY and submit any responses and revised reports.

21.21 Final Report

The Final Roadway Report shall include the following:

- Copies of U.S.G.S. and S.C.S. maps with project limits shown
- A report of tests sheet that summarizes the laboratory test results, the soil stratification (i.e. soils grouped into layers of similar materials) and construction recommendations relative to Standard Indices 500 and 505
- Results of all tasks discussed in the previous section (Data Interpretation and Analysis).
- An appendix that contains stratified soil boring profiles, laboratory test data sheets, sample embankment settlement and stability calculations, design LBR calculation/graphs, and other pertinent calculations.
- The CONSULTANT will respond in writing to any changes and/or comments from the COUNTY and submit any responses and revised reports.

21.22 Auger Boring Drafting

Draft auger borings as directed by the COUNTY.

21.23 SPT Boring Drafting

Draft SPT borings as directed by the COUNTY.

STRUCTURES

The CONSULTANT shall be responsible for coordination of all geotechnical related fieldwork activities. The CONSULTANT shall retain all samples until acceptance of Phase IV plans. Rock cores shall be retained as directed in writing by the District Geotechnical Engineer.

CONSULTANT shall perform specialized field-testing as required by needs of project and as directed in writing by the District Geotechnical Engineer.

All laboratory testing and classification will be performed in accordance with applicable COUNTY standards, ASTM Standards or AASHTO Standards, unless otherwise specified in the Contract Documents.

The staff hour tasks for high embankment fills and structural foundations for bridges, box culverts, walls, high-mast lighting, overhead signs, mast arm signals, strain poles, buildings, and other structures include the following:

21.24 Detailed Boring Location Plan

Develop a detailed boring location plan. Meet with COUNTY Geotechnical Project Manager for boring plan approval. If the drilling program expects to encounter artesian conditions, the CONSULTANT shall submit a methodology(s) for plugging the borehole to Florida Department of Transportation for approval prior to commencing with the boring program.

21.25 Stake Borings/Utility Clearance

Stake borings and obtain utility clearance.

21.26 MOT Plans for Field Investigation

Coordinate and develop MOT plan. All work zone traffic control will be performed in accordance with the DEPARTMENT's Roadway and Traffic Design Standards Index 600 series.

21.27 Drilling Access Permits

Obtain all State, County, City, and Water Management District permits for performing geotechnical borings, as needed.

21.28 Property Clearances

Notify property tenants in person of drilling and field activities, if applicable. Written notification to property owners/tenants is the responsibility of the COUNTY's Project Manager.

21.29 Collection of Corrosion Samples

Collect corrosion samples for determination of environmental classifications.

21.30 Coordination of Field Work

Coordinate all field work required to provide geotechnical data for the project.

21.31 Soil and Rock Classification - Structures

Soil profiles recorded in the field should be refined based on the results of laboratory testing.

21.32 Tabulation of Laboratory Data

Laboratory test results should be tabulated for inclusion in the geotechnical report and for the necessary calculations and analyses.

21.33 Design Groundwater Level for Structures

Review encountered ground water levels, estimate seasonal high groundwater levels, and evaluate groundwater levels for structure design.

21.34 Selection of Foundation Alternatives (BDR) (N/A)

Evaluation and selection of foundation alternative, including the following:

- Spread footings
- Prestressed concrete piling - various sizes
- Steel H- piles
- Steel pipe piles
- Drilled shafts

Foundation analyses shall be performed using approved Florida Department of Transportation methods. Assist in selection of the most economical, feasible, foundation alternative.

21.35 Detailed Analysis of Selected Foundation Alternate(s)

Detailed analysis and basis for the selected foundation alternative. Foundation analyses shall be performed using approved Florida Department of Transportation methods and shall include:

- For pile and drilled shaft foundations, provide graphs of ultimate axial soil resistance versus tip elevations. Calculate scour resistance and/or downdrag (negative skin friction), if applicable.
- CONSULTANT shall assist the Engineer of Record in preparing the Pile Data Table (including test pile lengths, scour resistance, downdrag, minimum tip elevation, etc.)
- Provide the design soil profile(s), which include the soil model/type of each layer and all soil-engineering properties required for the Engineer of Record to run the FBPIer computer program. Review lateral analysis of selected foundation for geotechnical compatibility.

- Shallow foundation bearing capacity (including soil bearing capacity, minimum footing width, and minimum embedment depth).
- Estimated maximum driving resistance anticipated for pile foundations.
- Provide settlement analysis.

21.36 Bridge Construction and Testing Recommendations (N/A)

Provide construction and testing recommendations including potential constructability problems.

21.37 Lateral Load Analysis (Optional)

Perform lateral load analyses as directed by the COUNTY.

21.38 Walls

Provide the design soil profile(s), which include the soil model/type of each layer and all soil engineering properties required by the Engineer of Record for conventional wall analyses and recommendations. Review wall design for geotechnical compatibility and constructability.

Evaluate the external stability of conventional retaining walls and retained earth wall systems. For retained earth wall systems, calculate and provide minimum soil reinforcement lengths versus wall heights, and soil parameters assumed in analysis. Estimate differential and total (long term and short term) settlements.

Provide wall construction recommendations.

21.39 Sheet Pile Wall Analysis (Optional)

Analyze sheet pile walls as directed by the COUNTY.

21.40 Soil Parameters for Signs, Signals, High Mast Lights, and Strain Poles and Geotechnical Recommendations

Provide the design soil profile(s) that include the soil model/type of each layer and all soil properties required by the Engineer of Record for foundation design. Review design for geotechnical compatibility and constructability.

21.41 Box Culvert Analysis

- Provide the design soil profile(s) that include the soil model/type of each layer and all soil properties required by the Engineer of Record for foundation design. Review design for geotechnical compatibility and constructability.
- Provide lateral earth pressure coefficients.
- Provide box culvert construction and design recommendations.
- Estimate differential and total (long term and short term) settlements.
- Evaluate wingwall stability.

21.42 Preliminary Report – BDR (N/A)

The preliminary structures report shall contain the following discussions as appropriate for the assigned project:

- Copies of U.S.G.S. and S.C.S. maps with project limits shown.
- Summary of structure background data, SCS, USGS, geologic and potentiometric data.
- The results of all tasks discussed in the previous section (Data Interpretation and Analysis).
- Recommendations for foundation installation, or other site preparation soils-related construction considerations with plan sheets as necessary.

- Any special provisions required for construction that are not addressed in the DEPARTMENT's Standard specification.
- An Appendix which includes SPT and CPT boring/sounding profiles, data from any specialized field tests, engineering analysis, notes/sample calculations, sheets showing ultimate bearing capacity curves versus elevation for piles and drilled shafts,, a complete FHWA check list, pile driving records (if available) and any other pertinent information.

21.43 Final Report - Bridge and Associated Walls (N/A)

The final structures report shall include the following:

- Copies of U.S.G.S. and S.C.S. maps with project limits shown.
- Summary of structure background data, SCS, USGS, geologic and potentiometric data.
- The results of all tasks discussed in the previous section (Data Interpretation and Analysis).
- Recommendations for foundation installation, or other site preparation soils-related construction considerations with plan sheets as necessary.
- Any special provisions required for construction that are not addressed in the DEPARTMENT's Standard specification.
- An Appendix which includes SPT and CPT boring/sounding profiles, data from any specialized field tests, engineering analysis, notes/sample calculations, sheets showing ultimate bearing capacity curves versus elevation for piles and drilled shafts,, a complete FHWA check list, pile driving records (if available) and any other pertinent information.

21.44 Final Reports - Signs, Signals, Box Culvert, Walls, and High Mast Lights

The final reports shall include the following:

- Copies of U.S.G.S. and S.C.S. maps with project limits shown.
- Summary of structure background data, SCS, USGS, geologic and potentiometric data.
- The results of all tasks discussed in the previous section (Data Interpretation and Analysis).
- Recommendations for foundation installation, or other site preparation soils-related construction considerations with plan sheets as necessary.
- Any special provisions required for construction that are not addressed in the DEPARTMENT's Standard specification.
- An Appendix which includes SPT and CPT boring/sounding profiles, data from any specialized field tests, engineering analysis, notes/sample calculations, sheets showing ultimate bearing capacity curves versus elevation for piles and drilled shafts,, a complete FHWA check list, pile driving records (if available) and any other pertinent information.

Final reports will incorporate comments from the COUNTY and contain any additional field or laboratory test results, recommended foundation alternatives along with design parameters and special provisions for the contract plans. These reports will be submitted to the District Geotechnical Engineer for review prior to project completion. After review by the District Geotechnical Engineer, the reports will be submitted to the District Geotechnical Engineer in final form and will include the following:

- All original plan sheets (11" x 17")
- One set of all plan and specification documents, in electronic format, according to COUNTY requirements
- Two sets of record prints
- Six sets of any special provisions
- All reference and support documentation used in preparation of contract plans package

Additional final reports (up to four), aside from stated above, may be needed and requested for the COUNTY's Project Manager and other disciplines.

The final reports, special provisions, as well as record prints, will be signed and sealed by a Professional Engineer registered in the State of Florida.

- Draft the detailed boring/sounding standard sheet, including environmental classification, results of laboratory testing, and specialized construction requirements, for inclusion in final plans.

21.45 Drafting

Prepare a complete set of drawings to include all SPT borings, auger borings and other pertinent soils information in the plans. Include these drawings in the Final Geotechnical Report. Draft borings, location map, S.C.S. map and U.S.D.A. map as directed by the COUNTY. Soil symbols must be consistent with those presented in the latest Florida Department of Transportation Soils and Foundations Handbook.

21.46 Technical Special Provisions

21.47 Field Reviews

Identify and note surface soil and rock conditions, surface water conditions and locations, and preliminary utility conflicts. Observe and note nearby structures and foundation types.

21.48 Technical Meetings

21.49 Quality Assurance/Quality Control

21.50 Supervision

21.51 Coordination

21.52 Optional Preliminary Contamination Assessment

When required, all work shall be performed in accordance with current Florida Department of Environmental Regulation (DER) and Federal OSHA and EPA standards. The following work shall be included, but not limited to:

- A minimum of four borings will be required per site.
- Soil gas analysis will be required by use of a flame ionization detector; e.g. Organic Vapor Analyzer (OVA).
- Installation of monitoring wells may be required.
- Water sampling and laboratory analysis may be required. The State of Florida Department of Health shall certify the laboratory performing the analysis.
- Four copies of the draft PCA report will be required for review and comment by the COUNTY. After comments have been addressed, six signed and sealed copies of the final PCA report shall be submitted to the COUNTY. Copies of all documents will be additionally transmitted to the COUNTY in electronic format in accordance with the COUNTY's current standards.

22 RIGHT OF WAY ASSESSMENT

22.1 Coordination

Initial meeting with Engineer and other Consultants and Subsequent Team Meetings

22.2 Initial Inspection

Initial inspection of Road Project and Area Improvements

22.3 Alternative Analysis

Review proposed Right of Way alternatives

22.4 Identify Compensable Impacts

22.5 Appraisals

Prepare abbreviated Appraisals on parcels affected by each alternative

22.6 Identify cost efficient compensable impacts

Coordinate with the engineer to identify cost efficient compensable impacts on affected parcels related to each alternative.

22.7 Values and Damages Report

Report to client with probable right of way values and damages on each alternative, as requested

22.8 Reports on Assessment Alternatives

Provide reports on Assessment Alternatives, appraisal findings including real estate damage estimates and costs to cure, as well as business damages where applicable

23 PROJECT REQUIREMENTS

23.1 Liaison Office

The COUNTY and the CONSULTANT will designate a Liaison Office and a Project Manager who shall be the representative of their respective organizations for the Project. While it is expected the CONSULTANT shall seek and receive advice from various state, regional, and local agencies, the final direction on all matters of this project remain with the COUNTY Project Manager.

23.2 Key Personnel

The CONSULTANT's work shall be performed and directed by the key personnel identified in the proposal presentations by the CONSULTANT. Any changes in the indicated personnel shall be subject to review and approval by COUNTY.

23.3 Progress Reporting

The CONSULTANT shall meet with the COUNTY as required and shall provide a written progress and schedule status reports that describe the work performed on each task. Progress and schedule status reports shall be delivered to the COUNTY concurrently with the monthly invoice. In addition, a bi-weekly progress report should be submitted to the COUNTY as an email attachment. The Project Manager will make judgment on whether work of sufficient quality and quantity has been accomplished by comparing the reported percent complete against actual work accomplished.

23.4 Correspondence

Copies of all written correspondence between the CONSULTANT and any party pertaining specifically to this contract shall be provided to the COUNTY for their records within one (1) week of the receipt or mailing of said correspondence.

23.5 Professional Endorsement

The CONSULTANT shall have a Registered Professional Engineer in the State of Florida sign and seal all reports, documents, and plans as required by COUNTY standards.

23.6 Computer Automation

The project will be developed utilizing Computer Aided Drafting and Design (CADD) systems. The DEPARTMENT makes available software to help assure quality and conformance with policy and procedures regarding CADD. It is the responsibility of the CONSULTANT to meet the requirements in the DEPARTMENT's CADD Manual. The CONSULTANT will submit final documents and files as described therein.

23.7 Coordination With Other Consultants

The CONSULTANT is to coordinate his work with any and all adjacent and integral consultants so as to effect complete and homogenous plans and specifications for the project(s) described herein.

23.8 Optional Services

At the COUNTY's option, the CONSULTANT may be requested to provide post design services. The fee for these services shall be negotiated in accordance with the terms detailed in Exhibit B, Method of Compensation, for a fair, competitive and reasonable cost, considering the scope and complexity of the project(s). A supplemental agreement adding the additional services shall be executed in accordance with paragraph 2.00 of the Standard Consultant Agreement. The additional services may include Construction Assistance, Review of Shop Drawings, Bridge Load Rating(s) update, or other Post Design Services as required.

24 INVOICING LIMITS

Payment for the work accomplished will be in accordance with Method of Compensation of this contract. Invoices shall be submitted to the COUNTY, in a format prescribed by the COUNTY. The COUNTY Project Manager and the CONSULTANT shall monitor the cumulative invoiced billings to insure the reasonableness of the billings compared to the project schedule and the work accomplished and accepted by the COUNTY.

The CONSULTANT will provide a list of key events and the associated total percentage of work considered to be complete at each event. This list will be used to control invoicing. Payments will not be made that exceed the percentage of work for any event until those events have actually occurred and the results are acceptable to the COUNTY.

EXHIBIT A-2

**TENTATIVE SCOPE OF SERVICES
PHASE III – POST DESIGN SERVICES**

County Project Number: *PS-XXXX*
Financial Project ID: *XXXX*
Description: *SR 434 from Interstate 4 to Rangeline Rd in Seminole County*

EXHIBIT A-2

1	PURPOSE	1
2	POST DESIGN SERVICES	1
2.1	Plans and Right of Way Documents Update and Maintenance	1
2.2	Construction Assistance	1
2.3	Permit Updates	2
2.4	Review Structural Shop Drawings	2
2.5	Survey Update	2
2.6	Web Site Updates (N/A)	2
2.7	Newsletters	2
3	INVOICING LIMITS	2

**SCOPE OF SERVICES FOR CONSULTING ENGINEERING SERVICES
HIGHWAY AND BRIDGE FINAL DESIGN & PERMITTING**

This Exhibit forms an integral part of the agreement between the Seminole County Board of County Commissioners (hereinafter referred to as the COUNTY) and XXXX (hereinafter referred to as the CONSULTANT) relative to the transportation facility described as follows:

County Project Number: XXXX
Financial Project ID: XXXX
Description: *SR 434 from Interstate 4 to Rangeline Rd in Seminole County*

1 PURPOSE

At the COUNTY's option, the CONSULTANT may be requested to provide post design services. The purpose is to achieve quality post design services from competent professionals in order to satisfactorily complete construction. These services are intended to address changed conditions or services not covered that occur following acceptance of final plans, including changes required as part of right of way acquisition. These services are not intended for instances of CONSULTANT error and/or omissions.

2 POST DESIGN SERVICES

The following descriptions provide a non-exclusive summary of the specific tasks within this Scope-of-Services and are the minimum criteria for project performance and execution. The COUNTY will issue work orders on an as needed basis. The CONSULTANT is responsible to provide the following required professional services as requested:

2.1 Plans and Right of Way Documents Update and Maintenance

The CONSULTANT shall perform engineering analyses and/or make revisions to the plans, right of way maps, legal descriptions and special provisions, as requested by the COUNTY and the DEPARTMENT, to reflect additions, deletions and/or modifications prior to and subsequent to construction advertising. Whenever the plans or Right of Way Maps are revised, the CONSULTANT shall submit two (2) sets of signed and sealed half size prints of the revised sheets and one (1) set of the revised reproducibles. The Right of Way maps and drainage maps will be full size.

2.2 Construction Assistance

The CONSULTANT shall provide to the COUNTY qualified representation during the construction phase concerning the intent and interpretation of the construction plans and documents. Should changed conditions be encountered in the field and when requested by the COUNTY, the CONSULTANT shall respond in a timely manner with suitable engineering solutions which take into account the changed conditions.

On site appearance of CONSULTANT shall be made during construction at the written request of the COUNTY.

From time to time during construction, the COUNTY may request the CONSULTANT to review contractor proposed field changes or to respond with a recommended solution to remedy particular field situations not covered by the plans and specifications.

2.3 Permit Updates

The CONSULTANT shall provide valid permits extending through construction. The CONSULTANT shall apply for and provide the necessary information to modify, extend or renew required permits, prior to or subsequent to construction advertising.

2.4 Review Structural Shop Drawings

The CONSULTANT shall review structural shop drawings during construction as needed.

2.5 Survey Update

If requested, the CONSULTANT shall provide additional field survey updates prior to and during the construction contract.

2.6 Web Site Updates (N/A)

The CONSULTANT will maintain and update as needed the web site previously developed for this project. The web site will include information such as the project scope, schedule and progress.

2.7 Newsletters

The CONSULTANT will prepare and send out newsletters to inform the public of when construction will begin, general project information, and construction contacts. The newsletter will be sent to all those on the mailing list.

3 INVOICING LIMITS

Payment for the work accomplished will be in accordance with Method of Compensation of this contract. Invoices shall be submitted to the COUNTY, in a format prescribed by the COUNTY. The COUNTY Project Manager and the CONSULTANT shall monitor the cumulative invoiced billings to insure the reasonableness of the billings compared to the project schedule and the work accomplished and accepted by the COUNTY.

The CONSULTANT will provide a list of key events and the associated total percentage of work considered to be complete at each event. This list will be used to control invoicing. Payments will not be made that exceed the percentage of work for any event until those events have actually occurred and the results are acceptable to the COUNTY.

Board of County Commissioners
SEMINOLE COUNTY, FLORIDA

WORK ORDER

Work Order Number: _____

Master Agreement No.: _____ Dated: _____
Contract Title: _____
Project Title: _____

Consultant: _____
Address: _____

ATTACHMENTS TO THIS WORK ORDER:

- drawings/plans/specifications
- scope of services
- special conditions
- _____

METHOD OF COMPENSATION:

- fixed fee basis
- time basis-not-to-exceed
- time basis-limitation of funds

Term: This Work Order shall terminate upon completion of the project or _____
_____ from the date of execution, whichever comes first.

Work Order Amount: _____ DOLLARS (\$ _____)

IN WITNESS WHEREOF, the parties hereto have made and executed this Work Order on this _____ day of _____, 20____, for the purposes stated herein.

(THIS SECTION TO BE COMPLETED BY THE COUNTY)

ATTEST:

(CORPORATE SEAL) _____, Secretary

(Company Name)

By: _____, President

Date: _____

ATTEST:

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

BOARD OF COUNTY COMMISSIONERS
SEMINOLE COUNTY, FLORIDA

By: _____
DARYL G. MCLAIN, Chairman

Date: _____

For 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

WORK ORDER TERMS AND CONDITIONS

- a) Execution of this Work Order by the COUNTY shall serve as authorization for the CONSULTANT to provide, for the stated project, professional services as set out in the Scope of Services attached as Exhibit "A" to the Master Agreement cited on the face of this Work Order and as further delineated in the attachments listed on this Work Order.
- b) The CONSULTANT shall provide said services pursuant to this Work Order, its Attachments, and the cited Master Agreement (as amended, if applicable) which is incorporated herein by reference as if it had been set out in its entirety.
- c) Whenever the Work Order conflicts with the cited Master Agreement, the Master Agreement shall prevail.
- d) METHOD OF COMPENSATION - If the compensation is based on a:
 - (i) FIXED FEE BASIS, then the Work Order Amount becomes the Fixed Fee Amount and the CONSULTANT shall perform all work required by this Work Order for the Fixed Fee Amount. The Fixed Fee is an all-inclusive Firm Fixed Price binding the CONSULTANT to complete the work for the Fixed Fee Amount regardless of the costs of performance. In no event shall the CONSULTANT be paid more than the Fixed Fee Amount.
 - (ii) TIME BASIS WITH A NOT-TO-EXCEED AMOUNT, then the Work Order Amount becomes the Not-to-Exceed Amount and the CONSULTANT shall perform all the work required by this Work Order for a sum not exceeding the Not-to-Exceed Amount. In no event is the CONSULTANT authorized to incur expenses exceeding the not-to-exceed amount without the express written consent of the COUNTY. Such consent will normally be in the form of an amendment to this Work Order. The CONSULTANT's compensation shall be based on the actual work required by this Work Order and the Labor Hour Rates established in the Master Agreement.
 - (iii) TIME BASIS WITH A LIMITATION OF FUNDS AMOUNT, then the Work Order Amount becomes the Limitation of Funds amount and the CONSULTANT is not authorized to exceed the Limitation of Funds amount without prior written approval of the COUNTY. Such approval, if given by the COUNTY, shall indicate a new Limitation of Funds amount. The CONSULTANT shall advise the COUNTY whenever the CONSULTANT has incurred expenses on this Work Order that equals or exceeds eighty percent (80%) of the Limitation of Funds amount. The CONSULTANT's compensation shall be based on the actual work required by this Work Order and the Labor Hour Rates established in the Master Agreement.
- e) Payment to the CONSULTANT shall be made by the COUNTY in strict accordance with the payment terms of the referenced Master Agreement.
- f) It is expressly understood by the CONSULTANT that this Work Order, until executed by the COUNTY, does not authorize the performance of any services by the CONSULTANT and that the COUNTY, prior to its execution of the Work Order, reserves the right to authorize a party other than the CONSULTANT to perform the services called for under this Work Order; if it is determined that to do so is in the best interest of the COUNTY.
- g) The CONSULTANT shall sign the Work Order first and the COUNTY second. This Work Order becomes effective and binding upon execution by the COUNTY and not until then. A copy of this Work Order will be forwarded to the CONSULTANT upon execution by the COUNTY.

Exhibit "C"
Rate Schedule

Truth in Negotiations Certificate

This is to certify that, to the best of my knowledge and belief, the wage rates and other factual unit costs supporting the compensation (as defined in section 287.055 of the Florida Statutes (otherwise known as the "Consultants' Competitive Negotiations Act" or CCNA) and required under CCNA subsection 287.055 (5) (a) submitted to Seminole County Purchasing and Contracts Division, Contracts Section, either actually or by specific identification in writing, in support of PS- _____ - _____* are accurate, complete, and current as of _____ (Date)**.

This certification includes the wage rates and other factual unit costs supporting any Work Orders or Amendments issued under the agreement between the Consultant and the County.

Firm _____

Signature _____

Name _____

Title _____

Date of execution*** _____

* Identify the proposal, request for price adjustment, or other submission involved, giving the appropriate identifying number (e.g., PS No.).

** Insert the day, month, and year when wage rates were submitted or, if applicable, an earlier date agreed upon between the parties that is as close as practicable to the date of agreement on compensation.

*** Insert the day, month, and year of signing.

(End of certificate)