

**WORK AUTHORIZATION # CM2420-WA03  
NASSAU COUNTY  
BOARD OF COUNTY COMMISSIONERS RFQ/BID NO. NC16-029**

<b>Consultant:</b>	England-Thims & Miller, Inc.
<b>Contract Number:</b>	CM2420-WA03
<b>Contact Name:</b>	Jim Donchez
<b>Contact Number:</b>	904-642-8990
<b>Email:</b>	<a href="mailto:DonchezJ@etminc.com">DonchezJ@etminc.com</a>

CURRENT WORK AUTHORIZATION			
Project Short Title: Amelia Island Hotel			
		CONTRACT OVERVIEW	
Date Submitted	9/27/18	Total of Previous Authorizations	\$102,522.13
		Change Orders/Adjustment	0
Amount	\$44,043.00	This Work Authorization	\$44,043.00
Scheduled Completion	See below	Current Contract Total	\$146,565.13

This Work Authorization is to the AGREEMENT between Nassau County and the Consultant known as the Continuing Contract for Construction Engineering Inspection (CEI) Services for Nassau County, Florida, dated June 12, 2017. The services to be provided under this Work Authorization are as follows:

ARTICLE 1. Services Described as:

England-Thims & Miller, Inc. shall provide Construction Engineering and Inspection service to be on the Project site to observe the performance of the work for conformance with the approved contract drawings, plans, and specification to the contract documents in accordance with attached hereto as Exhibit "A".

ARTICLE 2. Time Schedule

England-Thims & Miller, Inc. will provide all services included within the scope of services within total construction time of 60 days plus 10 days for the Mitigation Plan Phase 1 inspection. Task completion for individual requests under this work authorization will be determined on a case by cases basis.

ARTICLE 3. Budget

England-Thims & Miller, Inc. will perform the scope of services outlined herein for a not to exceed fee \$44,043.00. Performed services will be paid on an hourly rate basis per contract, attached hereto as Exhibit "B".

9/27/18

CS-18-23

Article 4. Other Provisions


The Services covered by this Work Authorization will be performed in accordance with the provisions set forth in the AGREEMENT referenced above and any of its attachments or schedules. This Work Authorization will become a part of the referenced AGREEMENT when executed by both parties.

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In presenting this Work Authorization, Consultant agrees that:

Unless detailed herein, all drawings, data, electronic files and other information required for this Work Authorization has been accepted by Consultant. Specifically, all electronic files have been reviewed and accepted for the purposes of this Work assignment. Any additional information, including detailed scope of services is attached.

AGREED TO BY: ENGLAND-THIMS & MILLER *01000000 - 201000 Vouchers payables*

BY:   
Print Name: JIM DONCHEZ  
Title: DIRECTOR OF LAND DEVELOPMENT CEI  
Date: 10-1-18

RECOMMENDED AND APPROVED BY NASSAU COUNTY:

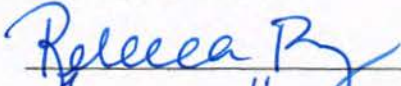
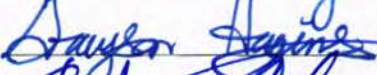
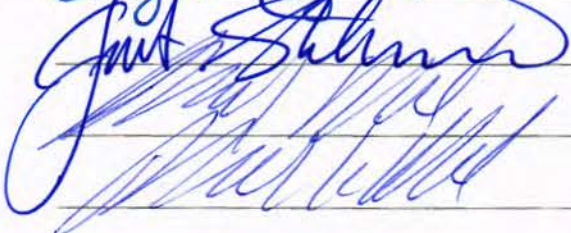
Public Works Director

Contract Management

Office of Management and Budget

County Attorney

Interim County Manager

APPROVED by the INTERIM COUNTY MANAGER, designee for the BOARD OF COUNTY COMMISSIONERS, this 10th day of October, 2018.

ACCOUNT NUMBER: \_\_\_\_\_



**Exhibit A**  
**CEI SERVICES**  
**AMELIA ISLAND HOTEL**  
**SCOPE OF SERVICES**

**PART ONE – CEI Services**

**1 COMMERCIAL PROJECT REPRESENTATION**

- 1.1 CONSULTANT shall provide inspection services as contemplated by the Code Enforcement Board in and for Nassau County, Case No. 3557 and as agreed to in the fee schedule to inspect the work in order to reasonably protect Nassau County (COUNTY) from defects and deficiencies in such work and to better determine that the work is proceeding in accordance with the Consent Final Order. See EXHIBIT "A" – Mitigation Plan.
- 1.2 CONSULTANT will be expected to provide periodic on-site inspections and observations as appropriate to Exhibit "A" Mitigation Plan Phase 1. This includes inspection services for the Soil Treatment Area's, Tree Protection Zones, Geogrid installation per the Mitigation Plan, and Tree Pruning observation on behalf of the COUNTY.
- 1.3 CONSULTANT will also be expected to provide periodic inspections services on all other horizontal construction (Paving, Drainage, Utilities, Sidewalk, etc.) and observations as appropriate to the stage of construction.
- 1.4 CONSULTANT will provide daily documentation of the progress of the work in a format acceptable to the COUNTY including weekly reports on the Mitigation improvements.
- 1.5 CONSULTANT shall conduct periodic inspections of the Tree Mitigation Plan areas after completion during infrastructure improvements in conformance with the consent final order.
- 1.6 CONSULTANT will not assume responsibility for the Contractor's means, methods, techniques, sequences or procedures of construction and it is understood that field services provided by CONSULTANT will not relieve the Contractor of his responsibilities for performing the work in accordance with the plans and specifications.
- 1.7 The words "supervision", "inspection", or "control" are used to mean periodic observation of the work and the conducting of tests by CONSULTANT to verify substantial compliance with the plans, specifications and design concepts.

**2 CONTRACT ADMINISTRATION**

- 2.1 CONSULTANT shall not be responsible for full time Contract Administration/Management services but shall endeavor to support the COUNTY staff as needed.
- 2.2 CONSULTANT shall be on the Project site, full time, while actual construction is in progress at intervals, appropriate to the various stages of construction as the

CONSULTANT, as an experienced and qualified design professional, deems necessary in order to observe and determine if the work is proceeding in substantial accordance

with the Mitigation Plan and Consent Final Order. The CONSULTANT shall endeavor to protect the COUNTY against defects and deficiencies in the work and shall advise of any work failing to conform to the Consent Final Order or which in any way appears to be deficient, defective or otherwise not in accordance with good engineering or construction practices.

## **PART TWO – Contract Time**

### **1. COMMENCEMENT of SERVICES**

- 1.1 No work on this project shall be performed until a work order has been fully executed and a written Notice to Proceed has been issued by the COUNTY.
- 1.2 CONSULTANT shall attend the COUNTY'S pre-construction meeting and subsequent progress meetings as appropriate.
- 1.3 CONSULTANT realizes that time is of the essence and shall make reasonable efforts to progress the schedule of the project. Services rendered will commence upon the COUNTY'S approval and shall include the following durations: 10 days for Mitigation Plan Phase 1 observation and infrastructure construction time duration of 60 calendar days.

### **ITEMS NOT INCLUDED**

1. Full time Contract Administration services
2. Night or Weekend Inspection Efforts
3. Administration of Direct Owner Purchase program
4. Project Management services – PIO, Meeting/Meeting Minutes, Monthly Report
5. Shop Drawing Review required by Engineer of Record (EOR)
6. SJRWMD As-Built Certification
7. FDEP Water/Sewer Permit Certification
8. Geotechnical/PDA/Underdrain Investigations
9. OSHA or other Regulatory Safety Inspections
10. Electric, Phone, Cable, Gas Design, Coordination and Inspection
11. Review of Contractor Pay Applications
12. Landscape, Hardscape, Lighting or Irrigation Design and Inspection
13. Permitting & Permit Fees
14. Surveying and Construction Stakeout
15. Plat/Easement Preparation or Processing
16. Engineering/EOR Design Services
17. Final Signed & Sealed Asbuilt Survey and Certifications
18. Warranty Inspections
19. EOR Response to RFI's
20. Inspection of Vertical Construction
21. Soil testing requirements per Mitigation Plan will be handled by ISA Certified Arborist
22. Tree Pruning to be under the direction of ISA Certified Arborist
23. Overtime Hours
24. Inspection Services for Final Lift of Asphalt and close out services (i.e. Pre-final and final inspections and as-built reviews – approx. 30 days)



## EXHIBIT "A"

Mitigation Plan  
2246 Sadler Road  
Fernandina Beach, Florida 32034

### Phase I

#### Soil Treatment Area

In the area marked on Attachment 1 as the "Soil Treatment Area," the soil was stripped down to as much as 12-18' below the natural soil level. We will treat this area and replace the soil with suitable topsoil of 10-15% lignin-based organic matter, less than 60% sand and pH in the range of 6.3 – 6.7. The soil will be tested by an independent lab at University of Florida to insure proper soil components. Cambistat™ (paclobutrazol) tree growth regulator will be applied according to the product label at the base of each tree within the treatment areas to increase fine root density and help the trees overcome the effects of stress. No fertilizer will be applied for at least a year following construction.

As soon as possible, supplemental irrigation should begin with at least 1" per week of irrigation, unless there is natural precipitation equaling 1" in any week, in all areas of trees with damaged roots to keep the trees watered as well as possible. Watering at this rate will continue for at least a year after construction is complete.

#### Tree Protection Zones

Tree Protection Zones (TPZ) are indicated by the dotted circle around each tree to be saved. Realistic estimated barricade boundaries are indicated by the green lines on the drawing. Barricades will be constructed according to requirements contained in Article 37.02 of the Nassau County Land Development Code. The radius of these barricades around the tree should be about 1 foot for each inch of tree diameter up to 20 feet in radius unless there is good reason acceptable and approved by county staff that it should be less, such as access to the site or hardscape issues. No equipment or construction materials are allowed within these barricaded areas. Nassau County officials will be notified for final inspection when tree protection zone barricades are established.

#### Grading Plan in the Geogrid Areas (yellow on the map)

Geogrid will be installed as indicated on Attachment 1 in yellow which is the lesser of 10 feet from the trunk of the tree or the edge of excavation and the outer edge of the Tree Protection Zone. In the areas along the west side of the property, the excavation was measured as low as 12" - 18" below the natural grade.

1. The same soil used in the greenspace areas above (10-15% lignin-based organic matter, less than 60% sand and pH in the range of 6.3-6.7) will also be used as the first layer in these Geogrid areas. This layer could be as much as 8" but may vary depending on how much excavation has already occurred around the Geogrid areas surrounding the trees.
2. The next level will be a sheet of Tensar™ BX1200 biaxial geogrid mat will be installed.
3. Over this geogrid will be a 4" layer of clean #57 stone.
4. On top of the stone, we will place a layer of geotextile fabric to keep particles from filling in the air spaces between the stone.
5. On top of the geotextile will be 4" of limerock, which will be compacted to 90-95% for the final layer.
6. The final layer will be of 2" of asphalt. This technique will be used in the indicated yellow TPZ areas shown on the map.

7. No below-grade curbing with a footer will be installed within the Tree Protection Zone of the trees and any curbing or parking lot "edging" will be on grade and will not be installed closer than 10 feet from the outer edge of the trunk.

Cambistat™ (with paclobutrazol) tree growth regulator will be applied according to the product label at the base of each tree within the geogrid treatment areas to increase fine root density and help the trees overcome the effects of stress.

#### Tree Pruning

The trees along the west edge of the property will be pruned using a technique known as "branch end weight reduction" by shortening lateral branches to reduce branch end weight and increase stability. Each tree will be evaluated according to needs, with approximately 30-50% of the crown branch end weight pruned primarily on the west side of the crown according to ANSI A300 (Part 1) Pruning Standards under the direction of an ISA Certified Arborist with Tree Risk Assessment Qualification. No pruning along the east side of the above referenced trees is necessary at this time, but is subject to field verification at the direction of the above referenced arborist, and no live interior branches or water sprouts shall be removed. All trees with jagged roots damaged from excavation will be cut cleanly to provide a suitable "face" from which new root initials may emerge. Immediately after pruning, Cambistat™ (paclobutrazol) tree growth regulator will be applied according to the product label at the base of each retained tree to increase fine root density and help trees overcome the effects of stress.

#### Phase II

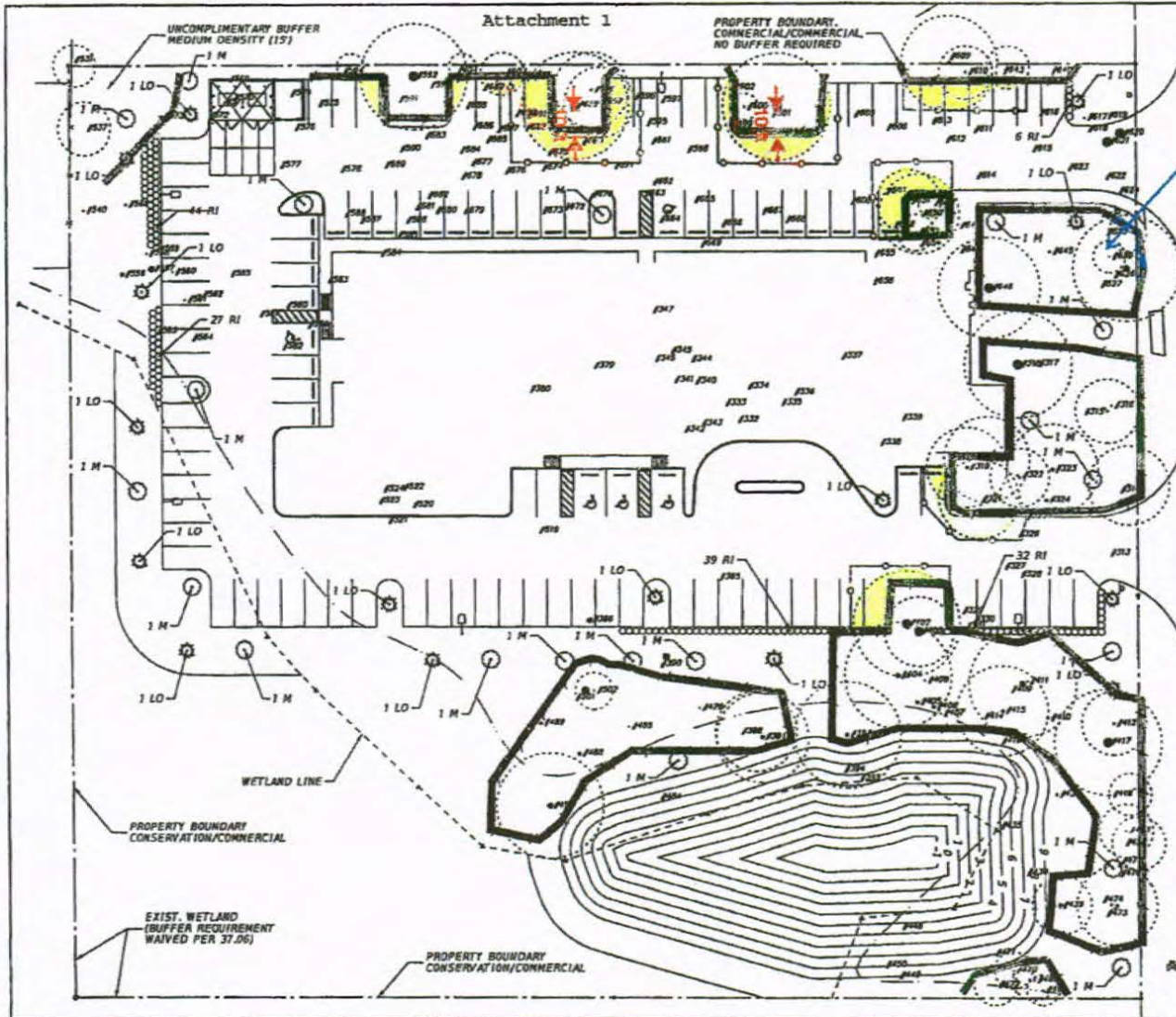
Planting 120" of trees estimated to be 15 4" live oak trees and 20 3" magnolia trees. Trees 4" or greater will be used if available at the time of planting, which may be an issue in this current peak construction and high demand environment. This results in 45.3% replacement with preservation credits. The approximate locations of the planned planted trees are on the graphical plan. All trees will be planted on the site to control survivability of the trees. They will be planted and maintained according to ANSI A300 (Part 6 Planting and Transporting Standards. Attachment 2 shows the 45.3% replacement calculations reflecting the trees to be saved and planted for mitigation.

Attachment 1: Graphical Depiction of Mitigation Plan.

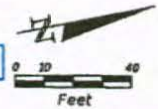
Attachment 2: Tree Preservation Calculations



Attachment 1



Soil Treatment Area



LANDSCAPING NOTES:

BUFFER LANDSCAPE:

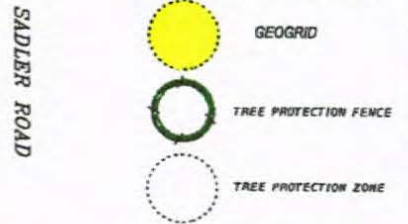
- NORTH: CG TO R/W = NONE REQUIRED
- SOUTH: CG TO WETLANDS = NONE REQUIRED  
CG TO RES = MEDIUM DENSITY (15)  
100' / 100' = 1.06 \* 4 = 4 CANOPY TREES REQUIRED  
100' / 100' = 1.06 \* 67 = 71 SHRUBS REQUIRED  
71 SHRUBS PROVIDED
- EAST: CG TO WETLANDS = NONE REQUIRED  
CG TO RES = MEDIUM DENSITY (15)  
119' / 100' = 1.15 \* 4 = 5 CANOPY TREES REQUIRED  
119' / 100' = 1.15 \* 67 = 77 SHRUBS REQUIRED  
77 SHRUBS PROVIDED
- WEST: CG TO CG = NONE REQUIRED

PERIMETER LANDSCAPING:

- NORTH: CG TO LOCAL ROAD = 15'  
337' / 100' = 3.37 \* 3 = 10 CANOPY TREES REQUIRED
- SOUTH: NONE REQUIRED
- EAST: NONE REQUIRED
- WEST: NONE REQUIRED

INTERIOR LANDSCAPE / GREEN / OPEN SPACE:

TOTAL ACRES (NOT INCLUDING WETLANDS AND PERIMETER BUFFER) = 2.65 AC  
REQUIRED GREEN SPACE: 10% = 11,552 sq ft  
PROVIDED GREEN SPACE: 30% = 34,734 sq ft  
REQUIRED TREES (11,552/500) = 23  
PROVIDED TREES = 30+ EXISTING TREES LOCATED IN THE OPEN SPACES AROUND THE POOL AND FRONT OF THE HOTEL



NOTES:

- 1) TREES PLANTED NEAR THE DRIVEWAYS SHOULD HAVE A CANOPY AT LEAST 5' ABOVE THE GROUND SO AS TO NOT OBSTRUCT SIGHT DISTANCE FOR VEHICLES TURNING ONTO SADLER.
- 2) UNCOMPLEMENTARY LAND USE BUFFERS WILL COMPLY WITH SECTION 37.06 LDC. IF AT THE TIME OF CONSTRUCTION, IT IS DETERMINED THAT EXISTING VEGETATION TO REMAIN DOES NOT MEET REQUIREMENTS, ADDITIONAL PLANTINGS SHALL BE REQUIRED.

SYM	QTY.	COMMON NAME	BOTANICAL NAME	SIZE	REMARKS
M	26	Magnolia	Magnolia Grandiflora	Standard Tree 40' x 24"	Plant per plan
LD	15	Live Oak	Quercus Virgiana	Standard Tree 40' x 24"	Plant per plan
PH	0	East Palmetto Holly	Ilex Alternata	Standard Shrub 6' x 6"	Plant per plan
RI	148	Indian Hawthorne	Rhodaphysa Indica	20" Ht., 3' Gal	Max 20' AC.

SHEET NO. 1

DATE	DESCRIPTION	REVISIONS	DATE	DESCRIPTION

Engineer of Record: Daniel S. McCroskey, P.E. P.E. # 50627  
**NLS&A** 3 South 2nd Street Fernandina Beach, FL 32034  
 (904) 325-8885

**AMBLER ISLAND HOTEL**  
**FERNANDINA BEACH, FLORIDA**

ROAD COUNTY PROJECT ID

MITIGATION PLAN



Attachment 2  
**Amelia Hotel**  
**Nassau County Tree Preservation Calculations**

AMELIA ISLAND HOTEL								Bonus	1.25
Native Canopy Tree Inventory (table 37-1 trees 6" or greater)								Percentile	0.8
Tree #	SPECIES	SIZE (DBH)		W/ BONUS	SAVED? (Y/N)	PROTECTED? (Y/N)	SAVED DBH	HEALTH	NOTES
313	LO	46	46	57.5	N	Y	0	1	
314	LO	15	15	15	Y	Y	15	1	
315	LO	21	21	26.25	Y	Y	26.25	1	
316	LO	10	10	10	Y	Y	10	1	
317	CDR	15	15	15	Y	Y	15	1	
318	LO	38	38	47.5	Y	Y	47.5	2	some wounding at base
319	LO	15	15	15	Y	Y	15	2	leans
320	LO	16	16	16	Y	Y	16	1	
321	LO	15	15	15	N	Y	0	2	leans
322	LO	20	20	25	Y	Y	25	3	dieback
323	SL	17	0	0	Y	N	0	1	
324	SL	19	0	0	N	N	0	3	small crook and fork
325	LO	16	16	16	N	Y	0	1	
326	MAG	8	8	8	N	Y	0	1	
327	LO	16	16	16	N	Y	0	1	
328	LAU	17	17	21.25	N	Y	0	3	some internal decay
329	LO	15	15	15	N	Y	0	1	
330	LO	10	10	10	N	Y	0	1	
331	LO	14	14	14	N	Y	0	1	
332	LO	19	19	23.75	N	Y	0	1	
333	LO	11	11	11	N	Y	0	1	
334	LO	10	10	10	N	Y	0	1	
335	LO	19	19	23.75	N	Y	0	1	
336	LO	19	19	23.75	N	Y	0	2	some delback
337	LO	55	55	68.75	N	Y	0	1	
338	LO	36	36	45	N	Y	0	2	leans - some dieback - needs cleaning
339	LO	14	14	14	N	Y	0	3	leans into another live oak
340	LO	10	10	10	N	Y	0	1	
341	LO	19	19	23.75	N	Y	0	1	
342	LO	21	21	26.25	N	Y	0	1	
343	LO	16	16	16	N	Y	0	1	
344	LO	11	11	11	N	Y	0	1	
345	LO	21	21	26.25	N	Y	0	1	
346	LO	19	19	23.75	N	Y	0	1	
347	SABAL	12	0	0	N	N	0	1	
365	LAU	26	26	32.5	N	Y	0	4	hollow and extensive visible decay at 15'
374	LAU	0	0	0	N	Y	0	4	This tree was found to have a larger decayed limb which was obscured by vines.
379	CDR	16	16	16	N	Y	0	4	decay at the base
380	H	22	22	27.5	N	Y	0	2	old
390	LAU	0	0	0	N	Y	0	4	34" - hollow with visible decay at base *Removed from calcs for poor health
391	LO	17	17	21.25	Y	Y	21.25	3	17" - appeared dead before from vines STATUS CHANGED TO 3 - NOT DEAD
392	LO	15	15	15	Y	Y	15	3	15" - appeared dead before from vines - STATUS CHANGED TO 2 - NOT DEAD
393	LO	20	20	25	Y	Y	25	2	vines
394	BAY	20	20	25	N	Y	0	3	part curved (cut) and part straight



**Amelia Hotel  
Nassau County Tree Preservation Calculations**

Tree #	SPECIES	SIZE (DBH)		W/ BONUS	SAVED? (Y/N)	PROTECTED? (Y/N)	SAVED DBH	HEALTH	NOTES
395	LO	21	21	26.25	N	Y	0	2	cut vines
402	LO	20	20	25	Y	Y	25	2	leans
403	LO	13	13	13	Y	Y	13	2	leans
404	LO	24	24	30	Y	Y	30	1	
405	LO	17	17	21.25	Y	Y	21.25	1	
406	LO	17	17	21.25	Y	Y	21.25	1	
407	MAG	6	6	6	Y	Y	6	1	
408	H	9	9	9	Y	Y	9	1	
409	MAG	28	28	35	Y	Y	35	1	
410	H	12	12	12	Y	Y	12	1	
411	MAG	0	0	0	N	Y	0	4	7" - grows at base of #409 *Removed from calcs for poor health
412	MAG	12	12	12	Y	Y	12	1	
414	LAU	0	0	0	N	Y	0	4	10" - diseased - phytophthora *Removed from calcs for poor health
415	LO	17	17	21.25	Y	Y	21.25	1	
416	H	7	7	7	Y	Y	7	2	leans
417	LO	20	20	25	Y	Y	25	1	
418	H	8	8	8	Y	Y	8	1	
422	LAU	10	10	10	Y	Y	10	2	some dead limbs
423	LAU	10	10	10	Y	Y	10	1	
426	H	12	12	12	Y	Y	12	1	
435	MA	7	7	7	N	Y	0	1	
438	LAU	7	7	7	N	Y	0	1	
439	MA	0	0	0	N	Y	0	4	31" - multi stem stump sprouts *Removed from calcs for poor health
446	MA	9	9	9	N	Y	0	4	shallow exposed roots - wet
449	HB	9	9	9	Y	Y	9	2	shallow roots
450	MA	8	8	8	N	Y	0	1	
468	HB	6	6	6	Y	Y	6	1	
469	HB	8	8	8	Y	Y	8	1	
470	HB	7	7	7	Y	Y	7	1	
471	MA	6	6	6	Y	Y	6	1	
472	HB	8	8	8	Y	Y	8	1	
473	HB	0	0	0	N	Y	0	4	27" - codominant (forked) at base *Removed from calcs for poor health
474	HB	12	12	12	Y	Y	12	1	
476	H	8	8	8	N	Y	0	1	
477	LO	6	6	6	N	Y	0	1	
484	LO	0	0	0	N	Y	0	5	extensive decay at base - cracks - vines - dead
485	H	6	6	6	N	Y	0	1	
488	LAU	0	0	0	N	Y	0	5	16" barely alive - extensive decay *Removed from calcs for poor health
489	LO	17	17	21.25	N	Y	0	2	bends
491	LO	27	27	33.75	Y	Y	33.75	1	
501	LAU	0	0	0	N	Y	0	4	36" - old and some hollowness *Removed from calcs for poor health
502	H	7	7	7	Y	Y	7	2	grows at base of #501
519	OR	10	0	0	N	N	0	1	
520	LO	24	24	30	N	Y	0	2	large portion dead
521	LO	25	25	31.25	N	Y	0	1	
522	LO	30	30	37.5	N	Y	0	2	large branches dead and needs pruning
523	LO	24	24	30	N	Y	0	1	
524	SABAL	10	0	0	N	N	0	1	
531	H	8	8	8	Y	Y	8	1	



Amelia Hotel  
Nassau County Tree Preservation Calculations

Tree #	SPECIES	SIZE (DBH)		W/ BONUS	SAVED? (Y/N)	PROTECTED? (Y/N)	SAVED DBH	HEALTH	NOTES
537	LAU	10	10	10	Y	Y	10	3	one stem (fork) died
540	WO	12	0	0	N	N	0	1	
556	LO	20	20	25	N	Y	0	1	
557	LO	29	29	36.25	N	Y	0	1	Beautiful.
558	LO	10	10	10	N	Y	0	2	bent
559	LAU	7	7	7	N	Y	0	1	
561	CDR	9	9	9	N	Y	0	1	
562	LAU	11	11	11	N	Y	0	1	
563	CHY	0	0	0	N	Y	0	4	24" - codominant at base 3X *Removed from calcs for poor health
564	HLY	5	5	5	N	Y	0	4	bent over and smothered by vines
565	H	12	12	12	N	Y	0	1	
566	LAU	13	13	13	Y	Y	13	1	
569	LAU	16	16	16	N	Y	0	2	leans
570	H	6	6	6	N	Y	0	1	
571	LAU	17	17	21.25	N	Y	0	1	
572	LAU	0	0	0	N	Y	0	4	15" - leans - partially failed at roots *Removed from calcs for poor health
573	SL	15	0	0	Y	N	0	3	covered with vines
574	LAU	16	16	16	N	Y	0	1	
575	WO	6	0	0	N	N	0	3	evidence of phytophthora
576	LAU	13	13	13	N	Y	0	1	
577	H	9	9	9	N	Y	0	2	bent
578	H	12	12	12	N	Y	0	2	dead stub at base
579	H	13	13	13	N	Y	0	3	codominant
580	WO	6	0	0	N	N	0	3	evidence of phytophthora
581	H	10	10	10	N	Y	0	1	
582	HB	8	8	8	N	Y	0	3	fork is dead and vines
583	H	8	8	8	N	Y	0	1	
584	LO	30	30	37.5	N	Y	0	2	bent over - part dead
585	LAU	16	16	16	N	Y	0	4	codominant at base
586	H	8	8	8	N	Y	0	1	
587	H	5	5	5	N	Y	0	2	minor decay at base
588	SL	19	0	0	N	N	0	4	forked
589	H	7	7	7	N	Y	0	1	
590	WO	9	0	0	N	N	0	1	
591	WO	7	0	0	N	N	0	1	
592	H	32	32	40	Y	Y	40	2	some decay at old branch near bottom - sounds solid
593	MAG	7	7	7	N	Y	0	1	
601	LO	50	50	62.5	Y	Y	62.5	1	
602	H	5	5	5	N	Y	0	1	
603	H	8	8	8	Y	Y	8	1	
605	CHY	5	5	5	N	Y	0	1	chl
606	CHY	16	16	16	N	Y	0	4	codominant and clearwing borers at base
607	CHY	16	16	16	N	Y	0	4	codominant, chl
608	LO	6	6	6	N	Y	0	3	shaded
609	LAU	18	18	22.5	Y	Y	22.5	1	
610	LAU	10	10	10	Y	Y	10	2	bends
611	CHY	12	12	12	N	Y	0	3	bent and odd base
612	H	11	11	11	N	Y	0	1	
613	CDR	8	8	8	N	Y	0	1	



Amelia Hotel  
Nassau County Tree Preservation Calculations

Tree #	SPECIES	SIZE (DBH)		W/ BONUS	SAVED? (Y/N)	PROTECTED? (Y/N)	SAVED DBH	HEALTH	NOTES
614	LAU	8	8	8	N	Y	0	2	evidence of phytophthora
615	CDR	7	7	7	N	Y	0	1	
616	H	7	7	7	N	Y	0	1	
617	H	9	9	9	Y	Y	9	1	
618	MAG	10	10	10	N	Y	0	1	
619	LO	22	22	27.5	N	Y	0	1	
620	LO	19	19	23.75	N	Y	0	1	
621	LO	22	22	27.5	N	Y	0	4	almost dead
622	LAU	8	8	8	N	Y	0	1	
623	LAU	8	8	8	N	Y	0	3	bent and bad crown
624	LAU	5	5	5	N	Y	0	1	
625	CDR	7	7	7	N	Y	0	1	
626	H	29	29	36.25	Y	Y	36.25	1	
627	SABAL	12	0	0	Y	N	0	1	
639	CDR	6	6	6	Y	Y	6	1	
640	LAU	0	0	0	N	Y	0	-	This tree was found to have damage high in the crown, possibly from Hurricane Irma.
643	H	8	8	8	Y	Y	8	1	
645	SABAL	12	0	0	Y	N	0	1	
646	LO	19	19	23.75	Y	Y	23.75	2	bent over - part dead
647	CHY	14	14	14	N	Y	0	1	
648	CHY	6	6	6	N	Y	0	1	
650	CHY	15	15	15	Y	Y	15	1	
651	LAU	12	12	12	Y	Y	12	2	evidence of phytophthora
652	LAU	10	10	10	N	Y	0	3	bent over
653	MAG	7	7	7	Y	Y	7	1	
654	H	6	6	6	N	Y	0	1	
655	H	8	8	8	N	Y	0	1	
656	LAU	5	5	5	N	Y	0	1	
657	LO	13	13	13	Y	Y	13	1	
658	CHY	14	14	14	Y	Y	14	1	
659	LO	26	26	32.5	Y	Y	32.5	1	
660	LAU	5	5	5	N	Y	0	1	
661	MAG	8	8	8	N	Y	0	1	
662	MAG	5	5	5	N	Y	0	3	grows at the base of big pine #663
663	SL	20	0	0	N	N	0	1	
664	LAU	13	13	13	N	Y	0	1	
665	MAG	6	6	6	N	Y	0	1	
666	LAU	10	10	10	N	Y	0	1	
667	CHY	12	12	12	N	Y	0	1	
668	H	8	8	8	N	Y	0	1	
669	MAG	6	6	6	N	Y	0	1	
670	LO	10	10	10	N	Y	0	1	
671	H	5	5	5	N	Y	0	3	pushed down by fallen tree
672	LAU	8	8	8	N	Y	0	4	decay at stem and base
673	H	8	8	8	N	Y	0	4	pushed over and heavy vines
674	H	9	9	9	N	Y	0	1	
675	CHY	14	14	14	N	Y	0	4	leans
676	H	6	6	6	N	Y	0	2	bent
677	H	5	5	5	N	Y	0	1	

**Amelia Hotel  
Nassau County Tree Preservation Calculations**

Tree #	SPECIES	SIZE (DBH)		W/ BONUS	SAVED? (Y/N)	PROTECTED? (Y/N)	SAVED DBH	HEALTH	NOTES
678	LO	10	10	10	N	Y	0	2	leans
679	H	6	6	6	N	Y	0	2	bent over from competition and vines
680	H	5	5	5	N	Y	0	3	bent over and some decay in stem
681	H	5	5	5	N	Y	0	1	
682	H	6	6	6	N	Y	0	1	
683	CHY	9	9	9	N	Y	0	1	
684	LAU	13	13	13	N	Y	0	1	
685	H	5	5	5	N	Y	0	1	
686	CHY	8	8	8	N	Y	0	1	
687	WO	5	0	0	N	N	0	4	suppressed
688	LAU	9	9	9	N	Y	0	1	
689	LAU	5	5	5	N	Y	0	1	
690	LAU	8	8	8	N	Y	0	3	evidence of phytophthora - minor decay at base
691	MAG	11	11	11	N	Y	0	1	
692	LRY	6	6	6	N	Y	U	1	

Percentile Bonus Size	17.0		
Pre-dev dbh	2373		2373
dbh saved	956		956
Mitigation planting	120		120
% dbh saved			45.3%
required			45%
additional saved			0.3%

Health Status
1= no apparent defect
2=minor defects
3=keep tree but has defects
4=poor health and suggest removal
5=severe defect and should be removed.

Species	Code	Count	Cumulative dbh	Protected
BAY	Sweet Bay	1	20	Y
CAM	Camphor	0	0	N
CDR	Cedar	7	68	Y
CHY	Cherry	14	147	Y
H	Hickory	41	380	Y
HB	Sugar Hackberry	8	58	Y
HLY	Holly	1	5	Y
LAU	Laurel Oak	38	344	Y
LO	Live Oak	62	1,207	Y
MA	Red Maple	5	30	Y
MAG	Magnolia	13	114	Y
OR	Orange	1	0	N
SABAL	Sabal Palm	4	0	N
SL	Slash Pine	5	0	N
WO	Water Oak	6	0	N

Trees planted for Mitigation	Total Inches	
15 4" Live oaks	60	
20 3" Magnolias	60	could change to larger diameter depending on availability
	<b>120</b>	<b>total inches of trees planted for mitigation</b>

Color legend
906.75 saved tree
not a protected species
removed for tree health
49.25 tree not preserved before, but suitable for preservation
129 protected tree that was removed



**Consultant CEI: England-Thims & Miller, Inc.**  
**Project Name: Amelia Island Hotel**  
**Bid No (s): NC 16-029**

**Mitigation Plan Phase 1\***

	<b>Hours</b>	<b>Rates</b>	<b>Direct Labor</b>
<b>Project Administrator</b>	20	141.15	\$2,823.00
<b>Senior Inspector</b>	80	89.7	\$7,176.00
Total Hours	100	Total Direct Labor	\$9,999.00

Straight Overtime @ 0%

Direct Labor	\$0.00
<b>Subtotal</b>	<b>\$9,999.00</b>
Premium Overtime	\$0.00
<b>Subtotal</b>	<b>\$9,999.00</b>

**Infrastructure to 1st lift Asphalt\***

	<b>Hours</b>	<b>Rates</b>	<b>Direct Labor</b>
<b>Project Administrator</b>	48	141.15	\$6,775.20
<b>Senior Inspector</b>	304	89.7	\$27,268.80
Total Hours	352	Total Direct Labor	\$34,044.00

Straight Overtime @ 0%

Direct Labor	\$0.00
<b>Subtotal</b>	<b>\$34,044.00</b>
Premium Overtime	\$0.00
<b>Subtotal</b>	<b>\$34,044.00</b>

TOTAL MAXIMUM LIMITING AMOUNT **\$44,043.00**

\* Hours based from schedule provided by contractor

**WORK AUTHORIZATION # CM2420-WA03  
NASSAU COUNTY  
BOARD OF COUNTY COMMISSIONERS RFQ/BID NO. NC16-029**

<b>Consultant:</b>	England-Thims & Miller, Inc.
<b>Contract Number:</b>	CM2420-WA03
<b>Contact Name:</b>	Jim Donchez
<b>Contact Number:</b>	904-642-8990
<b>Email:</b>	<a href="mailto:DonchezJ@etminc.com">DonchezJ@etminc.com</a>

CURRENT WORK AUTHORIZATION			
<b>Project Short Title: Amelia Island Hotel</b>			
		CONTRACT OVERVIEW	
<b>Date Submitted</b>	9/27/18	<b>Total of Previous Authorizations</b>	\$102,522.13
		<b>Change Orders/Adjustment</b>	0
<b>Amount</b>	\$44,043.00	<b>This Work Authorization</b>	\$44,043.00
<b>Scheduled Completion</b>	See below	<b>Current Contract Total</b>	\$146,565.13

This Work Authorization is to the AGREEMENT between Nassau County and the Consultant known as the Continuing Contract for Construction Engineering Inspection (CEI) Services for Nassau County, Florida, dated June 12, 2017. The services to be provided under this Work Authorization are as follows:

ARTICLE 1. Services Described as:

England-Thims & Miller, Inc. shall provide Construction Engineering and Inspection service to be on the Project site to observe the performance of the work for conformance with the approved contract drawings, plans, and specification to the contract documents in accordance with attached hereto as Exhibit "A".

ARTICLE 2. Time Schedule

England-Thims & Miller, Inc. will provide all services included within the scope of services within total construction time of 60 days plus 10 days for the Mitigation Plan Phase 1 inspection. Task completion for individual requests under this work authorization will be determined on a case by cases basis.

ARTICLE 3. Budget

England-Thims & Miller, Inc. will perform the scope of services outlined herein for a not to exceed fee \$44,043.00. Performed services will be paid on an hourly rate basis per contract, attached hereto as Exhibit "B".

9/27/18

CS-18-23



Article 4. Other Provisions

The Services covered by this Work Authorization will be performed in accordance with the provisions set forth in the AGREEMENT referenced above and any of its attachments or schedules. This Work Authorization will become a part of the referenced AGREEMENT when executed by both parties.


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In presenting this Work Authorization, Consultant agrees that:

Unless detailed herein, all drawings, data, electronic files and other information required for this Work Authorization has been accepted by Consultant. Specifically, all electronic files have been reviewed and accepted for the purposes of this Work assignment. Any additional information, including detailed scope of services is attached.

*01000000 - 201000 Vouchers payables*

AGREED TO BY: ENGLAND-THIMS & MILLER

BY:   
Print Name: JIM DONCHEZ  
Title: DIRECTOR OF LAND DEVELOPMENT CEI  
Date: 10-1-18

RECOMMENDED AND APPROVED BY NASSAU COUNTY:

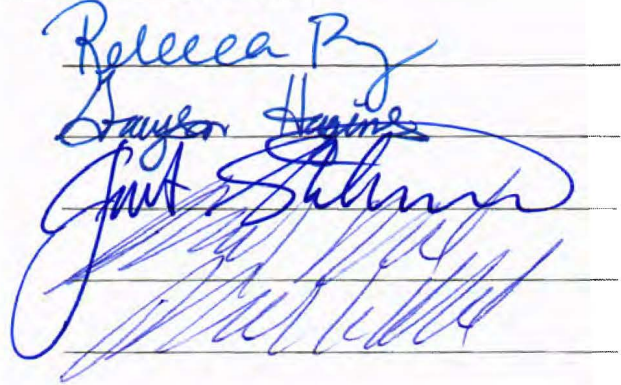
Public Works Director

Contract Management

Office of Management and Budget

County Attorney

Interim County Manager



APPROVED by the INTERIM COUNTY MANAGER, designee for the BOARD OF COUNTY COMMISSIONERS, this 10th day of October, 2018.

ACCOUNT NUMBER: \_\_\_\_\_

**Exhibit A**  
**CEI SERVICES**  
**AMELIA ISLAND HOTEL**  
**SCOPE OF SERVICES**

**PART ONE – CEI Services**

**1 COMMERCIAL PROJECT REPRESENTATION**

- 1.1 CONSULTANT shall provide inspection services as contemplated by the Code Enforcement Board in and for Nassau County, Case No. 3557 and as agreed to in the fee schedule to inspect the work in order to reasonably protect Nassau County (COUNTY) from defects and deficiencies in such work and to better determine that the work is proceeding in accordance with the Consent Final Order. See EXHIBIT "A" – Mitigation Plan.
- 1.2 CONSULTANT will be expected to provide periodic on-site inspections and observations as appropriate to Exhibit "A" Mitigation Plan Phase 1. This includes inspection services for the Soil Treatment Area's, Tree Protection Zones, Geogrid installation per the Mitigation Plan, and Tree Pruning observation on behalf of the COUNTY.
- 1.3 CONSULTANT will also be expected to provide periodic inspections services on all other horizontal construction (Paving, Drainage, Utilities, Sidewalk, etc.) and observations as appropriate to the stage of construction.
- 1.4 CONSULTANT will provide daily documentation of the progress of the work in a format acceptable to the COUNTY including weekly reports on the Mitigation improvements.
- 1.5 CONSULTANT shall conduct periodic inspections of the Tree Mitigation Plan areas after completion during infrastructure improvements in conformance with the consent final order.
- 1.6 CONSULTANT will not assume responsibility for the Contractor's means, methods, techniques, sequences or procedures of construction and it is understood that field services provided by CONSULTANT will not relieve the Contractor of his responsibilities for performing the work in accordance with the plans and specifications.
- 1.7 The words "supervision", "inspection", or "control" are used to mean periodic observation of the work and the conducting of tests by CONSULTANT to verify substantial compliance with the plans, specifications and design concepts.

**2 CONTRACT ADMINISTRATION**

- 2.1 CONSULTANT shall not be responsible for full time Contract Administration/Management services but shall endeavor to support the COUNTY staff as needed.
- 2.2 CONSULTANT shall be on the Project site, full time, while actual construction is in progress at intervals, appropriate to the various stages of construction as the

9/27/18



CONSULTANT, as an experienced and qualified design professional, deems necessary in order to observe and determine if the work is proceeding in substantial accordance

with the Mitigation Plan and Consent Final Order. The CONSULTANT shall endeavor to protect the COUNTY against defects and deficiencies in the work and shall advise of any work failing to conform to the Consent Final Order or which in any way appears to be deficient, defective or otherwise not in accordance with good engineering or construction practices.

## **PART TWO – Contract Time**

### **1. COMMENCEMENT of SERVICES**

- 1.1 No work on this project shall be performed until a work order has been fully executed and a written Notice to Proceed has been issued by the COUNTY.
- 1.2 CONSULTANT shall attend the COUNTY'S pre-construction meeting and subsequent progress meetings as appropriate.
- 1.3 CONSULTANT realizes that time is of the essence and shall make reasonable efforts to progress the schedule of the project. Services rendered will commence upon the COUNTY'S approval and shall include the following durations: **10** days for Mitigation Plan Phase 1 observation and infrastructure construction time duration of **60** calendar days.

### **ITEMS NOT INCLUDED**

1. Full time Contract Administration services
2. Night or Weekend Inspection Efforts
3. Administration of Direct Owner Purchase program
4. Project Management services – PIO, Meeting/Meeting Minutes, Monthly Report
5. Shop Drawing Review required by Engineer of Record (EOR)
6. SJRWMD As-Built Certification
7. FDEP Water/Sewer Permit Certification
8. Geotechnical/PDA/Underdrain Investigations
9. OSHA or other Regulatory Safety Inspections
10. Electric, Phone, Cable, Gas Design, Coordination and Inspection
11. Review of Contractor Pay Applications
12. Landscape, Hardscape, Lighting or Irrigation Design and Inspection
13. Permitting & Permit Fees
14. Surveying and Construction Stakeout
15. Plat/Easement Preparation or Processing
16. Engineering/EOR Design Services
17. Final Signed & Sealed Asbuilt Survey and Certifications
18. Warranty Inspections
19. EOR Response to RFI's
20. Inspection of Vertical Construction
21. Soil testing requirements per Mitigation Plan will be handled by ISA Certified Arborist
22. Tree Pruning to be under the direction of ISA Certified Arborist
23. Overtime Hours
24. Inspection Services for Final Lift of Asphalt and close out services (i.e. Pre-final and final inspections and as-built reviews – approx. 30 days)

## EXHIBIT "A"

Mitigation Plan  
2246 Sadler Road  
Fernandina Beach, Florida 32034

### Phase I

#### Soil Treatment Area

In the area marked on Attachment 1 as the "Soil Treatment Area," the soil was stripped down to as much as 12-18' below the natural soil level. We will treat this area and replace the soil with suitable topsoil of 10-15% lignin-based organic matter, less than 60% sand and pH in the range of 6.3 – 6.7. The soil will be tested by an independent lab at University of Florida to insure proper soil components. Cambistat™ (paclobutrazol) tree growth regulator will be applied according to the product label at the base of each tree within the treatment areas to increase fine root density and help the trees overcome the effects of stress. No fertilizer will be applied for at least a year following construction.

As soon as possible, supplemental irrigation should begin with at least 1" per week of irrigation, unless there is natural precipitation equaling 1" in any week, in all areas of trees with damaged roots to keep the trees watered as well as possible. Watering at this rate will continue for at least a year after construction is complete.

#### Tree Protection Zones

Tree Protection Zones (TPZ) are indicated by the dotted circle around each tree to be saved. Realistic estimated barricade boundaries are indicated by the green lines on the drawing. Barricades will be constructed according to requirements contained in Article 37.02 of the Nassau County Land Development Code. The radius of these barricades around the tree should be about 1 foot for each inch of tree diameter up to 20 feet in radius unless there is good reason acceptable and approved by county staff that it should be less, such as access to the site or hardscape issues. No equipment or construction materials are allowed within these barricaded areas. Nassau County officials will be notified for final inspection when tree protection zone barricades are established.

#### Grading Plan in the Geogrid Areas (yellow on the map)

Geogrid will be installed as indicated on Attachment 1 in yellow which is the lesser of 10 feet from the trunk of the tree or the edge of excavation and the outer edge of the Tree Protection Zone. In the areas along the west side of the property, the excavation was measured as low as 12" - 18" below the natural grade.

1. The same soil used in the greenspace areas above (10-15% lignin-based organic matter, less than 60% sand and pH in the range of 6.3-6.7) will also be used as the first layer in these Geogrid areas. This layer could be as much as 8" but may vary depending on how much excavation has already occurred around the Geogrid areas surrounding the trees.
2. The next level will be a sheet of Tensar™ BX1200 biaxial geogrid mat will be installed.
3. Over this geogrid will be a 4" layer of clean #57 stone.
4. On top of the stone, we will place a layer of geotextile fabric to keep particles from filling in the air spaces between the stone.
5. On top of the geotextile will be 4" of limerock, which will be compacted to 90-95% for the final layer.
6. The final layer will be of 2" of asphalt. This technique will be used in the indicated yellow TPZ areas shown on the map.



7. No below-grade curbing with a footer will be installed within the Tree Protection Zone of the trees and any curbing or parking lot “edging” will be on grade and will not be installed closer than 10 feet from the outer edge of the trunk.

Cambistat™ (with paclobutrazol) tree growth regulator will be applied according to the product label at the base of each tree within the geogrid treatment areas to increase fine root density and help the trees overcome the effects of stress.

#### Tree Pruning

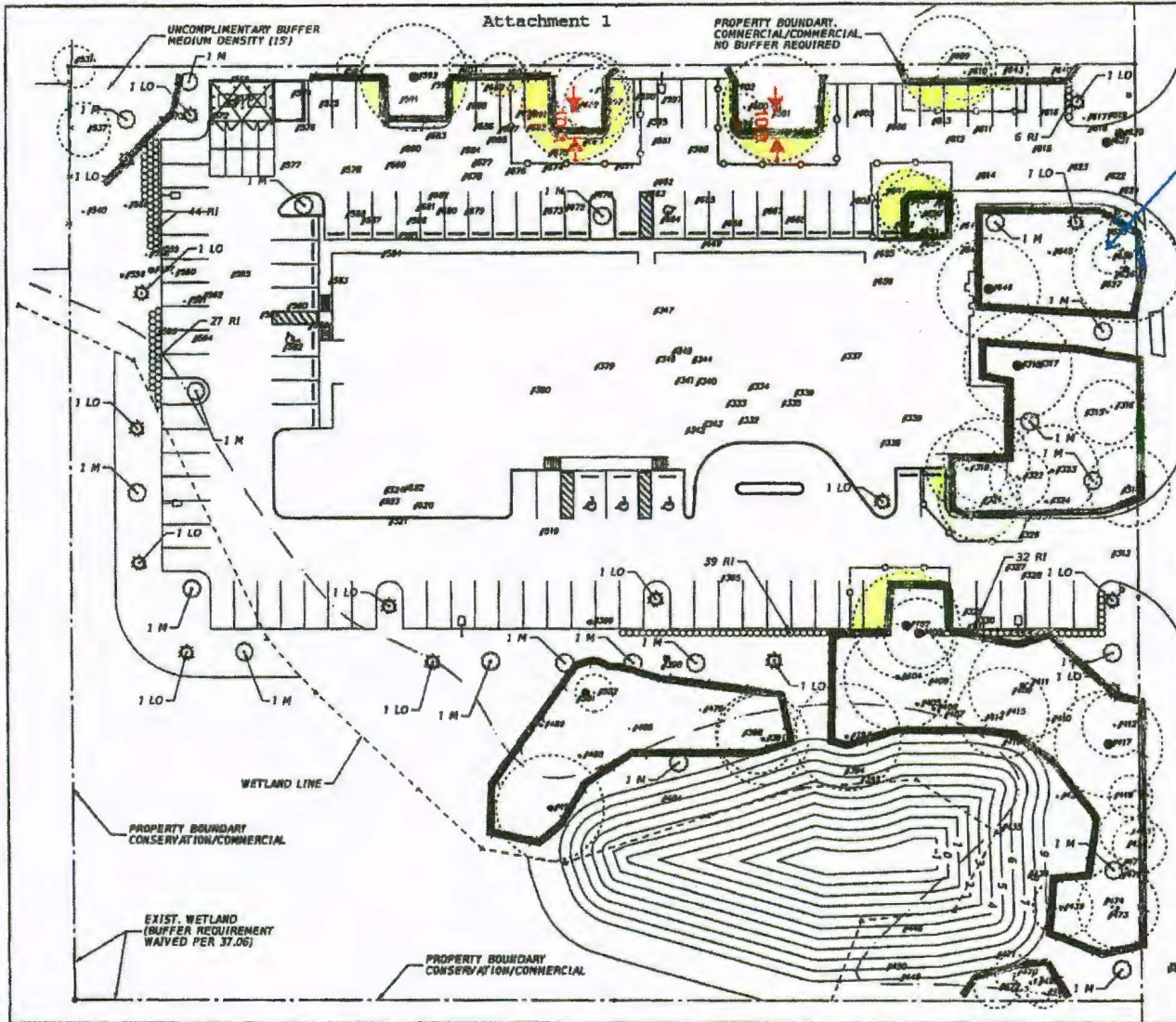
The trees along the west edge of the property will be pruned using a technique known as “branch end weight reduction” by shortening lateral branches to reduce branch end weight and increase stability. Each tree will be evaluated according to needs, with approximately 30-50% of the crown branch end weight pruned primarily on the west side of the crown according to ANSI A300 (Part 1) Pruning Standards under the direction of an ISA Certified Arborist with Tree Risk Assessment Qualification. No pruning along the east side of the above referenced trees is necessary at this time, but is subject to field verification at the direction of the above referenced arborist, and no live interior branches or water sprouts shall be removed. All trees with jagged roots damaged from excavation will be cut cleanly to provide a suitable “face” from which new root initials may emerge. Immediately after pruning, Cambistat™ (paclobutrazol) tree growth regulator will be applied according to the product label at the base of each retained tree to increase fine root density and help trees overcome the effects of stress.

#### Phase II

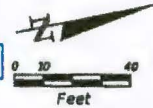
Planting 120” of trees estimated to be 15 4” live oak trees and 20 3” magnolia trees. Trees 4” or greater will be used if available at the time of planting, which may be an issue in this current peak construction and high demand environment. This results in 45.3% replacement with preservation credits. The approximate locations of the planned planted trees are on the graphical plan. All trees will be planted on the site to control survivability of the trees. They will be planted and maintained according to ANSI A300 (Part 6 Planting and Transporting Standards. Attachment 2 shows the 45.3% replacement calculations reflecting the trees to be saved and planted for mitigation.

Attachment 1: Graphical Depiction of Mitigation Plan.

Attachment 2: Tree Preservation Calculations



Soil Treatment Area



**LANDSCAPING NOTES:**

**BUFFER LANDSCAPE:**

- NORTH:** CG TO R/W = NONE REQUIRED  
CG TO WETLANDS = NONE REQUIRED  
CG TO RES = MEDIUM DENSITY (15)  
 $100' / 100' = 1.06 \times 4 = 4$  CANOPY TREES REQUIRED  
 $100' / 100' = 1.06 \times 67 = 71$  SHRUBS REQUIRED  
71 SHRUBS PROVIDED
- EAST:** CG TO WETLANDS = NONE REQUIRED  
CG TO RES = MEDIUM DENSITY (15)  
 $115' / 100' = 1.15 \times 4 = 5$  CANOPY TREES REQUIRED  
 $115' / 100' = 1.15 \times 67 = 77$  SHRUBS REQUIRED  
77 SHRUBS PROVIDED
- WEST:** CG TO CG = NONE REQUIRED

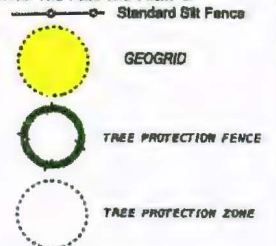
**PERIMETER LANDSCAPING:**

- NORTH:** CG TO LOCAL ROAD = 15  
 $350' / 100' = 3.5 \times 3 = 10$  CANOPY TREES REQUIRED
- SOUTH:** NONE REQUIRED
- EAST:** NONE REQUIRED
- WEST:** NONE REQUIRED

**INTERIOR LANDSCAPE / GREEN / OPEN SPACE:**

TOTAL ACRES (NOT INCLUDING WETLANDS AND PERIMETER BUFFER) = 2.55 AC  
REQUIRED GREEN SPACE: 10% = 11,552 sf  
PROVIDED GREEN SPACE: 30% = 34,734 sf  
REQUIRED TREES (11,552/500) = 23  
PROVIDED TREES = 30+ EXISTING TREES LOCATED IN THE OPEN SPACES AROUND THE POND AND FRONT OF THE HOTEL.

SADDLER ROAD



**NOTES:**  
1) TREES PLANTED NEAR THE DRIVEWAYS SHOULD HAVE A CANOPY AT LEAST 5' ABOVE THE GROUND SO AS TO NOT OBSTRUCT SIGHT DISTANCE FOR VEHICLES TURNING ONTO SADDLER.  
2) UNCOMPLEMENTARY LAND USE BUFFERS WILL COMPLY WITH SECTION 37.06 LOC. IF AT THE TIME OF CONSTRUCTION, IT IS DETERMINED THAT EXISTING VEGETATION TO REMAIN DOES NOT MEET REQUIREMENTS, ADDITIONAL PLANTINGS SHALL BE REQUIRED.

SYM.	QTY.	COMMON NAME	BOTANICAL NAME	SIZE	REMARKS
N	20	Nagelta	Nagelta Grandiflora	Shrub 6' x 6' - 8' dia.	Plant per plan
LD	15	Live Oak	Quercus Virginiana	Shrub 6' x 6' - 8' dia.	Plant per plan
PH	5	East Palmetto Holly	Ilex Allonusta	Shrub 6' x 6' - 8' dia.	Plant per plan
RI	148	Indian Hawthorne	Rachicostea Indica	30" Ht., 3 Gal	Plant per plan

DATE	DESCRIPTION	REVISIONS	DATE	DESCRIPTION

Engineer of Records  
**M&A**  
 Donald L. McCrindle, P.E.  
 P.E. # 20627  
 3 South 2nd Street  
 Fernandina Beach, FL 32034  
 904/252-6695

**ABELLEA ISLAND HOTEL**  
**FERNANDINA BEACH, FLORIDA**  
 ROAD COUNTY PROJECT ID

**MITIGATION PLAN**

SHEET NO.  
1



Attachment 2  
**Amelia Hotel**  
**Nassau County Tree Preservation Calculations**

AMELIA ISLAND HOTEL								Bonus	1.25
Native Canopy Tree Inventory (table 37-1 trees 6" or greater)								Percentile	0.8
Tree #	SPECIES	SIZE (DBH)		W/ BONUS	SAVED? (Y/N)	PROTECTED? (Y/N)	SAVED DBH	HEALTH	NOTES
313	LO	46	46	57.5	N	Y	0	1	
314	LO	15	15	15	Y	Y	15	1	
315	LO	21	21	26.25	Y	Y	26.25	1	
316	LO	10	10	10	Y	Y	10	1	
317	CDR	15	15	15	Y	Y	15	1	
318	LO	38	38	47.5	Y	Y	47.5	2	some wounding at base
319	LO	15	15	15	Y	Y	15	2	leans
320	LO	16	16	16	Y	Y	16	1	
321	LO	15	15	15	N	Y	0	2	leans
322	LO	20	20	25	Y	Y	25	3	dieback
323	SL	17	0	0	Y	N	0	1	
324	SL	19	0	0	N	N	0	3	small crook and fork
325	LO	16	16	16	N	Y	0	1	
326	MAG	8	8	8	N	Y	0	1	
327	LO	16	16	16	N	Y	0	1	
328	LAU	17	17	21.25	N	Y	0	3	some internal decay
329	LO	15	15	15	N	Y	0	1	
330	LO	10	10	10	N	Y	0	1	
331	LO	14	14	14	N	Y	0	1	
332	LO	19	19	23.75	N	Y	0	1	
333	LO	11	11	11	N	Y	0	1	
334	LO	10	10	10	N	Y	0	1	
335	LO	19	19	23.75	N	Y	0	1	
336	LO	19	19	23.75	N	Y	0	2	some delback
337	LO	55	55	68.75	N	Y	0	1	
338	LO	36	36	45	N	Y	0	2	leans - some dieback - needs cleaning
339	LO	14	14	14	N	Y	0	3	leans into another live oak
340	LO	10	10	10	N	Y	0	1	
341	LO	19	19	23.75	N	Y	0	1	
342	LO	21	21	26.25	N	Y	0	1	
343	LO	16	16	16	N	Y	0	1	
344	LO	11	11	11	N	Y	0	1	
345	LO	21	21	26.25	N	Y	0	1	
346	LO	19	19	23.75	N	Y	0	1	
347	SABAL	12	0	0	N	N	0	1	
365	LAU	26	26	32.5	N	Y	0	4	hollow and extensive visible decay at 15'
378	LAU	0	0	0	N	Y	0	3	This tree was found to have a larger decayed limb which was obscured by vines.
379	CDR	16	16	16	N	Y	0	4	decay at the base
380	H	22	22	27.5	N	Y	0	2	old
391	LAU	0	0	0	N	Y	0	4	34" - hollow with visible decay at base *Removed from calcs for poor health
391	LO	17	17	21.25	Y	Y	21.25	3	17" - appeared dead before from vines STATUS CHANGED TO 3 - NOT DEAD
392	LO	15	15	15	Y	Y	15	3	15" - appeared dead before from vines - STATUS CHANGED TO 2 - NOT DEAD
393	LO	20	20	25	Y	Y	25	2	vines
394	BAY	20	20	25	N	Y	0	3	part curved (cut) and part straight



**Amelia Hotel  
Nassau County Tree Preservation Calculations**

Tree #	SPECIES	SIZE (DBH)		W/ BONUS	SAVED? (Y/N)	PROTECTED? (Y/N)	SAVED DBH	HEALTH	NOTES
395	LO	21	21	26.25	N	Y	0	2	cut vines
402	LO	20	20	25	Y	Y	25	2	leans
403	LO	13	13	13	Y	Y	13	2	leans
404	LO	24	24	30	Y	Y	30	1	
405	LO	17	17	21.25	Y	Y	21.25	1	
406	LO	17	17	21.25	Y	Y	21.25	1	
407	MAG	6	6	6	Y	Y	6	1	
408	H	9	9	9	Y	Y	9	1	
409	MAG	28	28	35	Y	Y	35	1	
410	H	12	12	12	Y	Y	12	1	
411	MAG	0	0	0	N	Y	0	4	7" - grows at base of #409 *Removed from calcs for poor health
412	MAG	12	12	12	Y	Y	12	1	
413	LAU	0	0	0	N	Y	0	4	10" - diseased - phytophthora *Removed from calcs for poor health
415	LO	17	17	21.25	Y	Y	21.25	1	
416	H	7	7	7	Y	Y	7	2	leans
417	LO	20	20	25	Y	Y	25	1	
418	H	8	8	8	Y	Y	8	1	
422	LAU	10	10	10	Y	Y	10	2	some dead limbs
423	LAU	10	10	10	Y	Y	10	1	
426	H	12	12	12	Y	Y	12	1	
435	MA	7	7	7	N	Y	0	1	
438	LAU	7	7	7	N	Y	0	1	
445	MA	0	0	0	N	Y	0	4	31" - multi stem stump sprouts *Removed from calcs for poor health
446	MA	9	9	9	N	Y	0	4	shallow exposed roots - wet
449	HB	9	9	9	Y	Y	9	2	shallow roots
450	MA	8	8	8	N	Y	0	1	
468	HB	6	6	6	Y	Y	6	1	
469	HB	8	8	8	Y	Y	8	1	
470	HB	7	7	7	Y	Y	7	1	
471	MA	6	6	6	Y	Y	6	1	
472	HB	8	8	8	Y	Y	8	1	
473	HB	0	0	0	N	Y	0	4	27" - codominant (forked) at base *Removed from calcs for poor health
474	HB	12	12	12	Y	Y	12	1	
476	H	8	8	8	N	Y	0	1	
477	LO	6	6	6	N	Y	0	1	
484	LO	0	0	0	N	Y	0	5	extensive decay at base - cracks - vines - dead
485	H	6	6	6	N	Y	0	1	
488	LAU	0	0	0	N	Y	0	5	16" barely alive - extensive decay *Removed from calcs for poor health
489	LO	17	17	21.25	N	Y	0	2	bends
491	LO	27	27	33.75	Y	Y	33.75	1	
493	LAU	0	0	0	N	Y	0	4	36" - old and some hollowness *Removed from calcs for poor health
502	H	7	7	7	Y	Y	7	2	grows at base of #501
519	OR	10	0	0	N	N	0	1	
520	LO	24	24	30	N	Y	0	2	large portion dead
521	LO	25	25	31.25	N	Y	0	1	
522	LO	30	30	37.5	N	Y	0	2	large branches dead and needs pruning
523	LO	24	24	30	N	Y	0	1	
524	SABAL	10	0	0	N	N	0	1	
531	H	8	8	8	Y	Y	8	1	



**Amelia Hotel  
Nassau County Tree Preservation Calculations**

Tree #	SPECIES	SIZE (DBH)		W/ BONUS	SAVED? (Y/N)	PROTECTED? (Y/N)	SAVED DBH	HEALTH	NOTES
537	LAU	10	10	10	Y	Y	10	3	one stem (fork) died
540	WO	12	0	0	N	N	0	1	
556	LO	20	20	25	N	Y	0	1	
557	LO	29	29	36.25	N	Y	0	1	Beautiful.
558	LO	10	10	10	N	Y	0	2	bent
559	LAU	7	7	7	N	Y	0	1	
561	CDR	9	9	9	N	Y	0	1	
562	LAU	11	11	11	N	Y	0	1	
	CHY	0	0	0	N	Y	0	4	24" - codominant at base 3X *Removed from calcs for poor health
564	HLY	5	5	5	N	Y	0	4	bent over and smothered by vines
565	H	12	12	12	N	Y	0	1	
566	LAU	13	13	13	Y	Y	13	1	
569	LAU	16	16	16	N	Y	0	2	leans
570	H	6	6	6	N	Y	0	1	
571	LAU	17	17	21.25	N	Y	0	1	
	LAU	0	0	0	N	Y	0	4	15" - leans - partially failed at roots *Removed from calcs for poor health
573	SL	15	0	0	Y	N	0	3	coverd with vines
574	LAU	16	16	16	N	Y	0	1	
575	WO	6	0	0	N	N	0	3	evidence of phytophthora
576	LAU	13	13	13	N	Y	0	1	
577	H	9	9	9	N	Y	0	2	bent
578	H	12	12	12	N	Y	0	2	clear stob at base
579	H	13	13	13	N	Y	0	3	codominant
580	WO	6	0	0	N	N	0	3	evidence of phytophthora
581	H	10	10	10	N	Y	0	1	
582	HB	8	8	8	N	Y	0	3	fork is dead and vines
583	H	8	8	8	N	Y	0	1	
584	LO	30	30	37.5	N	Y	0	2	bent over - part dead
585	LAU	16	16	16	N	Y	0	4	codominant at base
586	H	8	8	8	N	Y	0	1	
587	H	5	5	5	N	Y	0	2	minor decay at base
588	SL	19	0	0	N	N	0	4	forked
589	H	7	7	7	N	Y	0	1	
590	WO	9	0	0	N	N	0	1	
591	WO	7	0	0	N	N	0	1	
592	H	32	32	40	Y	Y	40	2	some decay at old branch near bottom - sounds solid
593	MAG	7	7	7	N	Y	0	1	
601	LO	50	50	62.5	Y	Y	62.5	1	
602	H	5	5	5	N	Y	0	1	
603	H	8	8	8	Y	Y	8	1	
605	CHY	5	5	5	N	Y	0	1	chl
606	CHY	16	16	16	N	Y	0	4	codominant and clearwing borers at base
607	CHY	16	16	16	N	Y	0	4	codominant, chl
608	LO	6	6	6	N	Y	0	3	shaded
609	LAU	18	18	22.5	Y	Y	22.5	1	
610	LAU	10	10	10	Y	Y	10	2	bends
611	CHY	12	12	12	N	Y	0	3	bent and odd base
612	H	11	11	11	N	Y	0	1	
613	CDR	8	8	8	N	Y	0	1	



**Amelia Hotel  
Nassau County Tree Preservation Calculations**

Tree #	SPECIES	SIZE (DBH)		W/ BONUS	SAVED? (Y/N)	PROTECTED? (Y/N)	SAVED DBH	HEALTH	NOTES
614	LAU	8	8	8	N	Y	0	2	evidence of phytophthora
615	CDR	7	7	7	N	Y	0	1	
616	H	7	7	7	N	Y	0	1	
617	H	9	9	9	Y	Y	9	1	
618	MAG	10	10	10	N	Y	0	1	
619	LO	22	22	27.5	N	Y	0	1	
620	LO	19	19	23.75	N	Y	0	1	
621	LO	22	22	27.5	N	Y	0	4	almost dead
622	LAU	8	8	8	N	Y	0	1	
623	LAU	8	8	8	N	Y	0	3	bent and bad crown
624	LAU	5	5	5	N	Y	0	1	
625	CDR	7	7	7	N	Y	0	1	
626	H	29	29	36.25	Y	Y	36.25	1	
627	SABAL	12	0	0	Y	N	0	1	
639	CDR	6	6	6	Y	Y	6	1	
643	LAU	0	0	0	N	Y	0	1	This tree was found to have damage high in the crown, possibly from Hurricane Irma.
643	H	8	8	8	Y	Y	8	1	
645	SABAL	12	0	0	Y	N	0	1	
646	LO	19	19	23.75	Y	Y	23.75	2	bent over - part dead
647	CHY	14	14	14	N	Y	0	1	
648	CHY	6	6	6	N	Y	0	1	
650	CHY	15	15	15	Y	Y	15	1	
651	LAU	12	12	12	Y	Y	12	2	evidence of phytophthora
652	LAU	10	10	10	N	Y	0	3	bent over
653	MAG	7	7	7	Y	Y	7	1	
654	H	6	6	6	N	Y	0	1	
655	H	8	8	8	N	Y	0	1	
656	LAU	5	5	5	N	Y	0	1	
657	LO	13	13	13	Y	Y	13	1	
658	CHY	14	14	14	Y	Y	14	1	
659	LO	26	26	32.5	Y	Y	32.5	1	
660	LAU	5	5	5	N	Y	0	1	
661	MAG	8	8	8	N	Y	0	1	
662	MAG	5	5	5	N	Y	0	3	grows at the base of big pine #663
663	SL	20	0	0	N	N	0	1	
664	LAU	13	13	13	N	Y	0	1	
665	MAG	6	6	6	N	Y	0	1	
666	LAU	10	10	10	N	Y	0	1	
667	CHY	12	12	12	N	Y	0	1	
668	H	8	8	8	N	Y	0	1	
669	MAG	6	6	6	N	Y	0	1	
670	LO	10	10	10	N	Y	0	1	
671	H	5	5	5	N	Y	0	3	pushed down by fallen tree
672	LAU	8	8	8	N	Y	0	4	decay at stem and base
673	H	8	8	8	N	Y	0	4	pushed over and heavy vines
674	H	9	9	9	N	Y	0	1	
675	CHY	14	14	14	N	Y	0	4	leans
676	H	6	6	6	N	Y	0	2	bent
677	H	5	5	5	N	Y	0	1	



**Amelia Hotel  
Nassau County Tree Preservation Calculations**

Tree #	SPECIES	SIZE (DBH)		W/ BONUS	SAVED? (Y/N)	PROTECTED? (Y/N)	SAVED DBH	HEALTH	NOTES
678	LO	10	10	10	N	Y	0	2	leans
679	H	6	6	6	N	Y	0	2	bent over from competition and vines
680	H	5	5	5	N	Y	0	3	bent over and some decay in stem
681	H	5	5	5	N	Y	0	1	
682	H	6	6	6	N	Y	0	1	
683	CHY	9	9	9	N	Y	0	1	
684	LAU	13	13	13	N	Y	0	1	
685	H	5	5	5	N	Y	0	1	
686	CHY	8	8	8	N	Y	0	1	
687	WO	5	0	0	N	N	0	4	suppressed
688	LAU	9	9	9	N	Y	0	1	
689	LAU	5	5	5	N	Y	0	1	
690	LAU	8	8	8	N	Y	0	3	evidence of phytophthora - minor decay at base
691	MAG	11	11	11	N	Y	0	1	
692	CHY	6	6	6	N	Y	0	1	

Percentile Bonus Size		17.0	
Pre-dev dbh	2373		2373
dbh saved	956		956
Mitigation planting	120		120
% dbh saved			45.3%
required			45%
additional saved			0.3%

Health Status
1= no apparent defect
2=minor defects
3=keep tree but has defects
4=poor health and suggest removal
5=severe defect and should be removed.

Species	Code	Count	Cumulative dbh	Protected
BAY	Sweet Bay	1	20	Y
CAM	Camphor	0	0	N
CDR	Cedar	7	68	Y
CHY	Cherry	14	147	Y
H	Hickory	41	380	Y
HB	Sugar Hackberry	8	58	Y
HLY	Holly	1	5	Y
LAU	Laurel Oak	38	344	Y
LO	Live Oak	62	1,207	Y
MA	Red Maple	5	30	Y
MAG	Magnolia	13	114	Y
OR	Orange	1	0	N
SABAL	Sabal Palm	4	0	N
SL	Slash Pine	5	0	N
WO	Water Oak	6	0	N

Trees planted for Mitigation	Total Inches	
15 4" Live oaks	60	
20 3" Magnolias	60	could change to larger diameter depending on availability
	120	total inches of trees planted for mitigation

Color legend	
906.75 saved tree	not a protected species
removed for tree health	
49.25 tree not preserved before, but suitable for preservation	
129 protected tree that was removed	

**Consultant CEI: England-Thims & Miller, Inc.**  
**Project Name: Amelia Island Hotel**  
**Bid No (s): NC 16-029**

**Mitigation Plan Phase 1\***

	<b>Hours</b>	<b>Rates</b>	<b>Direct Labor</b>
<b>Project Administrator</b>	20	141.15	\$2,823.00
<b>Senior Inspector</b>	80	89.7	\$7,176.00
Total Hours	100	Total Direct Labor	\$9,999.00

Straight Overtime @ 0%	Direct Labor	\$0.00
	<b>Subtotal</b>	<u>\$9,999.00</u>
	Premium Overtime	\$0.00
	<b>Subtotal</b>	<u>\$9,999.00</u>

**Infrastructure to 1st lift Asphalt\***

	<b>Hours</b>	<b>Rates</b>	<b>Direct Labor</b>
<b>Project Administrator</b>	48	141.15	\$6,775.20
<b>Senior Inspector</b>	304	89.7	\$27,268.80
Total Hours	352	Total Direct Labor	\$34,044.00

Straight Overtime @ 0%	Direct Labor	\$0.00
	<b>Subtotal</b>	<u>\$34,044.00</u>
	Premium Overtime	\$0.00
	<b>Subtotal</b>	<u>\$34,044.00</u>

TOTAL MAXIMUM LIMITING AMOUNT      **\$44,043.00**

\* Hours based from schedule provided by contractor