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**CHANGE ORDER APPROVAL FORM**

PROJECT: CR115A Bridge over Little St Mary's CHANGE ORDER: \_\_\_\_\_

DATE: 11/10/16

CONTRACT NUMBER: CM2329

TO CONTRACTOR: Hal Jones Contractor, Inc.

Reason for Change Order: Pay for 42LF overrun of prestressed concrete piling at contract unit price of \$50.00/LF. Total overrun equals \$2,100.00 including allowed mark-up.

Original Contract Sum.....	\$	<u>390,950.00</u>
Net Change by Previous Change Order/Supplemental Agreement.	\$	<u>8,600.69</u>
Contract Sum Prior to This Change Order.....	\$	<u>399,550.69</u>
Amount of This Change Order (Add/Deduct).....	\$	<u>2,100.00</u>
New Contract Sum Including this Change Order.....	\$	<u>401,650.69</u>

The contract for substantial completion will be (increased) (decreased) (unchanged) by 0 days;  
Substantial Completion: 12/06/16; Final Completion: 01/05/17

APPROVED BY: [Signature] DATE: 11/12/16  
Project Manager (Department Head)

APPROVED BY: [Signature] DATE: 11/16/16  
Procurement Manager

APPROVED BY: [Signature] DATE: 11/21/16  
Director of Office of Management & Budget

APPROVED BY: [Signature] DATE: 11/22/16  
County Manager

ACCOUNT NO.: 63470541-563100 BRIDG

SECTION 00 63 63

CHANGE ORDER REQUEST FORM

CR 115A Bridge Over Little St. Mary's River

No. D

PROJECT

DATE OF ISSUANCE: August 9, 2016

EFFECTIVE DATE:

NASSAU COUNTY BOARD OF COUNTY COMMISSIONERS

COUNTY Contract No.: CM 2329

CONTRACTOR: Hal Jones Contractors, Inc.

ENGINEER / ARCHITECT: Civil Services, Inc.

You are directed to make the following changes in the Contract Documents.

Description: Pay for 42 LF overrun of prestressed concrete piling at contract unit price of \$50.00/LF. Total overrun equals \$2,100.00 including allowed mark-up.

Reason for Change Order: Payment is based upon Specification 455-11.2.1 and the Authorized Production Pile Length Letter.

Attachments: (List documents supporting change): Specification 455-11.2.1, Authorized Production Pile Length Letter.


<p>CHANGE IN CONTRACT PRICE:</p> <p>Original Contract Price</p> <p>\$ <u>390,950.00</u></p>	<p>CHANGE IN CONTRACT TIMES:</p> <p>Original Contract Times</p> <p>Substantial Completion: <u>90 Days</u></p> <p>Ready for Final Payment: <u>120 Days</u> (days or dates)</p>
<p>Net change from previous Change Orders No. <u>A</u> to No. <u>C</u></p> <p>\$ <u>8,600.69</u></p>	<p>Net change from previous Change Orders No. <u>A</u> to No. <u>C</u></p> <p><u>47</u> (days)</p>
<p>Contract Price prior to this Change Order</p> <p>\$ <u>399,550.69</u></p>	<p>Contract Times Prior to this Change Order</p> <p>Substantial Completion: <u>137 Days</u></p> <p>Ready for Final Payment: <u>167 Days</u> (days or dates)</p>
<p>Net Increase (decrease) of this Change Order</p> <p>\$ <u>2,100.00</u></p>	<p>Net Increase (decrease) of this Change Order</p> <p><u>0</u> (days)</p>
<p>Contract Price with all approved Change Orders</p> <p>\$ <u>401,650.69</u></p>	<p>Contract Times with all approved Change Orders</p> <p>Substantial Completion: <u>137 Days</u></p> <p>Ready for Final Payment: <u>167 Days</u> (days or dates)</p>

RECOMMENDED:

By:   
Engineer/Architect (Authorized Signature)


Date: 11/10/16

APPROVED:

By:   
COUNTY (Authorized Signature)

Date: 11/22/16

ACCEPTED:

By:   
Contractor (Authorized Signature)

Date: 11/10/16

1. List and size of proposed equipment including cranes, barges, driving equipment, jetting equipment, compressors, and preformed pile hole equipment. Include manufacturer's data sheets on hammers.

2. Methods to determine hammer energy in the field for determination of pile capacity. Include in the submittal necessary charts and recent calibrations for any pressure measuring equipment.

3. Detailed drawings of any proposed followers.

4. Detailed drawings of templates.

5. Details of proposed load test equipment and procedures, including recent calibrations of jacks and required load cells.

6. Sequence of driving of piles for each different configuration of pile layout.

7. Details of proposed features and procedures for protection of existing structures.

8. Required shop drawings for piles, cofferdams, etc.

9. Methods and equipment proposed to prevent displacement of piles during placement and compaction of fill within 15 feet of the piles.

10. Methods to prevent deflection of battered piles due to their own weight and to maintain their as-driven position until casting of the pile cap is complete.

11. Proposed pile splice locations and details of any proprietary splices anticipated to be used.

12. Methods and equipment proposed to prevent damage to voided or cylinder piles due to interior water pressure.

Notify the Engineer of any test pile driving and production pile driving at least one week prior to beginning the installation operations of any pile.

**455-10.2 Acceptance of Equipment and Procedures:** All equipment and procedures are subject to satisfactory field performance. Make any required changes that may result from unsatisfactory field performance. The Engineer will give final acceptance after the Contractor makes necessary modifications. Do not make any changes in the driving system after acceptance without authorization of the Engineer. A hammer repaired on site or removed from the site and returned is considered to have its performance altered (efficiency increased or decreased), which is considered a change in the driving system and is subject to a dynamic load test in accordance with 455-5.13 at no additional compensation.

#### **455-11 Method of Measurement (All Piling).**

**455-11.1 Treated Timber Piling:** The quantity to be paid for will be the length, in feet, furnished, placed, and accepted according to the authorized lengths list, including any additions and excluding any deletions thereto, as approved by the Engineer.

#### **455-11.2 Prestressed Concrete Piling:**

**455-11.2.1 General:** The quantity to be paid for will be the length, in feet, of prestressed concrete piling furnished, driven and accepted according to the authorized lengths list, including any additions and excluding any deletions thereto, as approved by the Engineer.

**455-11.2.2 Furnished Length:** The furnished length of precast concrete piles will be considered as the overall length from head to tip. Final pay length will be based on the casting length as authorized in accordance with 455-5.14.3 subject to provisions of 455-11.2.3 through 455-11.2.8, 455-11.8, 455-11.9 and 455-11.12.

**REVISED**

September 23, 2016

Mr. Greg Tolbert  
Hal Jones Contractor, Inc.  
720 Talleyrand Avenue  
Jacksonville, Florida 32202

Subject: Production Pile Length and Driving Criteria  
CR115A over Little St. Mary's River Bridge 740068  
Nassau County, Florida  
E&A Proposal No. 24219

Dear Greg:

Ellis & Associates, Inc. has completed the dynamic pile testing for the subject project. The dynamic testing was performed on September 21 through 23, 2016 to determine the capacity and integrity of the test pile using PDA Model 8G. The tested pile was a 90-foot long, 18-inch square pre-stressed, pre-cast concrete piles (PC/PS) located at Bent 7, Pile 1. The driving system consisted of an APE D36 open-end diesel hammer (OED), with a 9 <sup>3</sup>/<sub>4</sub> inch thick (original thickness) plywood pile cushion.

The required nominal bearing resistance (NBR) for this project is 352 kips. The test pile was installed to a tip elevation of EL. -71.38. The test pile achieved an end of initial drive capacity of approximately 367 kips as determined from the end of re-drive plot with a corresponding damping factor ( $J_c$ ) of 0.59. A re-strike was performed on September 23, 2016, and a beginning of re-strike capacity of approximately 600 kips as determined from CAPWAP analysis with a corresponding damping factor ( $J_c$ ) of 0.59.

Based on the results of the testing we recommend a production pile length of 85 feet.

The driving criteria should be one of the following:

1. Practical Refusal (20 blows per one inch) is reached during driving with a maximum fuel setting 1 (maximum stroke of 6.0 feet). Adjust hammer to fuel setting 2 if hard driving in the limestone layer is encountered. Keep driving at fuel setting 2 until the blow count drops below 35 blows per foot and reduce the fuel setting to one.
2. A minimum blow count of 35 blows per foot is reached during driving with a maximum fuel setting 1 (maximum stroke of 6.0 feet) below a tip elevation of -52.0. Adjust hammer to fuel setting 2 if hard driving in the limestone layer is encountered. Keep driving at fuel setting 2 until the blow count drops below 35 blows per foot and reduce the fuel setting to one.

If the driving criteria is not achieved while the pile is within one foot of cutoff, please call us for further recommendations.

Thank you for allowing Ellis and Associates, Inc. the opportunity to provide engineering services for this project. Should you have any questions regarding this report, please contact this office.

Sincerely,  
**ELLIS & ASSOCIATES, INC.**

Andrew Thomas, E.I.  
Dynamic Testing Engineer

**Nemer**  
**Y Oweis**  
Digitally signed by Nemer Y Oweis  
DN: cn=US, o=IdenTrust ACES  
Business Representative, ou=ELLIS  
AND ASSOCIATES, cn=Nemer Y  
Oweis,  
0.9.2342.19200300.100.1.1=AD109  
7C00000143D588E86700005424  
Date: 2016.09.23 14:58:28 -0400

Nemer (Nick) Y. Oweis, P.E.  
Chief Engineer  
Licensed, Florida No. 44755

7064 Davis Creek Road, Jacksonville, FL 32256 ■ Phone: (904) 880-0960 & (800) 273-0960 / Fax: (904) 880-0970

Offices: Jacksonville, FL, Daytona, FL, and Brunswick, GA

[www.ellisassoc.com](http://www.ellisassoc.com)