

PANAMA CANAL AUTHORITY		VARIATION	PAGE 1 OF 3
1. REQUEST FOR PROPOSAL No.:	2. CONTRACT No.:	3. DATE:	
RFP-76161	CMC-221427	February 23 , 2012	
		4. VARIATION No.:	
		28	

5. ISSUED BY:

PANAMA CANAL AUTHORITY  
Employer's Representative  
Locks Project Management Division  
Building 740, Corozal  
Panama, Republic of Panama

6. NAME AND ADDRESS OF CONTRACTOR (INCLUDE PHYSICAL & POSTAL ADDRESS)	7. CONTRACTOR'S TELEPHONE NUMBER:
Grupo Unidos por el Canal, S.A. Building 22B, Brujas Road Cocoli, Republic of Panama	507-316-9900
	8. CONTRACTOR'S FACSIMILE NUMBER:

9. VARIATION:

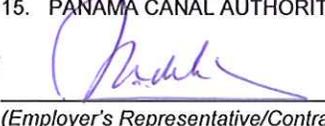
- The contract referred to in item No. 2 is hereby varied as set forth in item 10, entitled "DESCRIPTION OF VARIATION".  
 YES.  NO. The contractor shall send a copy, duly signed, of this Variation to the Employer's Representative/Contracting Officer.

	9 A. THIS VARIATION IS EXECUTED ON THE BASIS OF: (Specify the legal authority). THE VARIATION DESCRIBED IN ITEM 10 IS HEREBY INCORPORATED AND MADE A PART OF THE CONTRACT.
	9 B. THE CONTRACT REFERRED TO IN ITEM NO. 2, IS VARIED TO INCORPORATE ADMINISTRATIVE CHANGES (such as the paying office, account numbers, etc.).
X	9 C. THIS BILATERAL AGREEMENT IS SIGNED AND INCORPORATED INTO THE CONTRACT REFERRED TO IN ITEM NO. 2 OF THIS FORM, ON THE BASIS OF: (Specify the legal authority) Volume III, Conditions of Contract , Sub-Clause 1.16 [Entire Agreement], 4 <sup>th</sup> Paragraph
	9 D. OTHER. (Specify manner and the legal authority).
	9 E. ACCOUNT NUMBER (If required):

10. DESCRIPTION OF THE VARIATION (List in accordance with the order of the Contract. If additional space is required, use blank sheets).

### See attached

Except for the variation(s) herein specified, all other terms and conditions of the Contract remain unchanged.

11. NAME AND TITLE OF THE PERSON AUTHORIZED TO SIGN (Type or print)	12. NAME AND TITLE OF THE EMPLOYER'S REPRESENTATIVE/CONTRACTING OFFICER (Type or print)		
Bernardo Gonzalez Contractor's Representative	Jorge de la Guardia, Employer's Representative		
13. CONTRACTOR	14. DATE:	15. PANAMA CANAL AUTHORITY	16. DATE:
 (Authorized signature)	11/03/2012	 (Employer's Representative/Contracting Officer's signature)	23/II/2012

Variation No. 28 is issued to incorporate the following changes:

1. **Volume II, Part 2, Section 01 86 13 [Plant Mech. Systems and Equipment]-**  
Delete Paragraph 1.05 B and replace it with the following:

*"B. After completion of the design, the Contractor shall submit to the Employer's Representative for his review, 5 sets of final design data. The final design data shall include but not be limited to:"* (RFV-102)

2. **Volume II, Part 2, Section 01 86 13 [Plant Mech. Systems and Equipment]-**  
Delete Paragraph 1.05 B.2 and replace it with the following:

*"2. Final design drawings shall be of high quality and complete to permit the Employer a thorough evaluation of the technical design solutions provided for the proposed systems. The final drawings shall include but not be limited to the general arrangement of equipment, distribution devices, piping, isometric diagrams, notes, sections and all necessary details deemed necessary for the construction of the systems."* (RFV-102)

3. **Volume II, Part 2, Section 01 86 13 [Plant Mech. Systems and Equipment]-**  
Delete Paragraph 1.05 D and replace it with the following:

*"D. **Material and Equipment Schedules:** A complete schedule of materials and equipment proposed for installation shall be submitted by the Contractor for review. The schedule shall be submitted prior to manufacturing of custom made equipment and materials, and prior to shipment, of commercial off-the shelf equipment and material. The schedule shall include model numbers, cuts, diagrams, drawings, fan curves, materials, cooling capacity, painting information, and such other descriptive data as may be required. No consideration will be given to partial lists submitted from time to time. Favorable review of materials will be based on manufacturer's published ratings. Materials and equipment listed which are not in accordance with the specification requirements will be rejected."* (RFV-102)

4. **Volume II, Part 2, Section 01 86 13 [Plant Mech. Systems and Equipment]-**  
Delete Paragraph 1.05 D and replace it with the following:

*"D. Coating Thickness shall be appropriate for the environment and service. Coatings for underground and underwater service shall have a minimum thickness of 0.508 mm, unless recommended otherwise by the coating manufacturer in which case it shall be submitted to the Employer's Representative for approval."* (RFV-111)

5. **Volume II, Part 2, Section 28 23 00 [Closed Circuit Video Systems]-** Delete Paragraph 1.03 C.3.d. 1), and replace it with the following:



Design and Construction of the Third Set of Locks

"1) Units shall have either two thermal sensors and two lenses, or a single thermal sensor meeting optical specifications with a variable lens. In either case, cameras shall be un-cooled and have PTZ capabilities." (RFI-0405)

6. **Volume II, Part 2, Section 40 91 00 [Primary Process Measurement Devices]-** Delete Paragraph 1.03 B.10.a.1 and replace it with the following:

*"1 This type of WLT shall be IP67 compliant per IEC 60529, light weight, non-contact, corrosion resistant, and suitable for installation on the top side of measuring wells. The units shall have 10 mm or better accuracy, an algorithm to eliminate reflection and wave effects, two 4-20 mA outputs, and a highly directional parabolic dish with frequency, sensor range, and size as required."* (RFV-108)

7. **Volume II, Part 2, Section 40 95 13.22 [Wastewater Treatment Control Systems] -** Delete Paragraph 1.03 H.1.b, and replace it with the following:

*"b. Based on information furnished by the Contractor, the Employer will make SCADA data base changes and additional HMI custom display pages in the existing master station at Miraflores Filtration Plant, as required for the new WTCSS to be provided at the Atlantic and Pacific Lock Complexes. A representative of the Contractor shall be present during testing."* (RFV-0087)

8. **Volume II, Part 2, Section 48 19 16 [Inverters]-** In Paragraph 1.01 B., Table 48.19.16-1, replace Line 4, as follows:

4.	(Deleted)
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(RFV-0080)

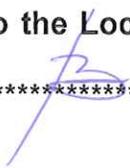
9. **Volume II, Part 2, Section 48 19 16 [Inverters]-** Delete Paragraph 1.03 B.1.a, and replace it with the following:

*"a. Inverters shall be static, capable of synchronizing with the AC line, and designed for heavy-duty industrial service. Expandable, modular units are preferable and shall be furnished if available for the required loads."* (RFV-0080)

10. **Volume II, Part 2, Section 48 19 16 [Inverters]-** Delete Paragraph 1.03 C.2.a, and replace it with the following:

*"a. Units shall be rack or floor mounted in electrical rooms of buildings where required, including machinery rooms, backup and main control buildings, and water saving basin buildings."* (RFV-0080)

11. **There is no time or cost impact to the Locks Contract as a consequence of this Variation.**

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