

**RESOLUTION**

**BE IT RESOLVED BY THE BOARD OF ALDERMEN OF THE CITY OF NEW BERN:**

**Section 1. That the change order from ABB Power Technologies for the Lewis Farm Road Substation Project in the sum of \$3,101 be and is hereby accepted.**

**Section 2. That the Mayor and City Clerk be and they are hereby authorized and directed to execute a change order with ABB Power Technologies for and on behalf of the City of New Bern, so long as said change order has been approved as to manner and form by the City Manager and City Attorney.**

Adopted this \_\_\_\_\_ day of \_\_\_\_\_, 2012

\_\_\_\_\_  
Mayor

\_\_\_\_\_  
City Clerk



**COMMERCIAL AND TECHNICAL TENDER**

**ABB Power Technologies**

**Prepared for:**

New Bern

**Prepared by:**

Chris Hoag  
655 Century Point  
Lake Mary, Fl. 32746  
(407) 732 -2175  
chris.hoag@us.abb.com

**Customer Name:**

New Bern

**Telephone:**

**ABB Tender ID**

**Date**

**Validity Date**

**Reference  
Number**

**Contact Person:**

11Q1139887  
Rev 2

16 Sep 2011

04 May 2011

ABB is pleased to offer the following in response to your request ABB:  
Revision on 2/17/2011: Change control voltage from 48 VDC to 125 VDC per email on 2/16/2011.  
Revision on 9-16-2011: Added FT-1 Test Switch, Electro switch Lock out Relay, and toggle switches per customer mark ups on drawings

**Pricing**

Item	Qty	Product Type	Net Price Each (USD)	Item Total (USD)
10	3	<b>MB25136ZZMH5KMZC01</b>  Lead time is 10 weeks after approval drawings are returned by the customer approved and released for manufacturing.	<b>24 577</b>	<b>73 731.00</b>
20	1	<b>MB25236VVMH5KMZZ01</b>  Lead time is 10 weeks after approval drawings are returned by the customer approved and released for manufacturing.	<b>25 555</b>	<b>25 555.00</b>

**Grand Total Sales Price: 99 286.00 USD**



**COMMERCIAL AND TECHNICAL TENDER**

**Alternate Line Items:**

Item	Qty	Product Type	Net Price Each (USD)	Item Total
40	3	MB25136ZZMH5KMZC02 Satec PM130 included  Lead time is 10 weeks after approval drawings are returned by the customer approved and released for manufacturing.	25 658	
50	1	MB25236VVMH5KMZZ02 Satec PM130 included  Lead time is 10 weeks after approval drawings are returned by the customer approved and released for manufacturing.	26 676	

**Spare Parts:**

Item	Qty	Product Type	Net Price Each (USD)	Item Total
30	1	1B09551G07 MAG.ACT.CTRL BOX 27KV STD TEMP LOW VOLT	1 740	

## COMMERCIAL AND TECHNICAL TENDER

### Technical Data Sheet (Alternates)

#### Item 40

**ABB Product ID:** MB25136ZZMH5KMZC02

**Breaker Type:**

Type R-MAG three phase air insulated, magnetically actuated, vacuum circuit breaker. Factory assembled, wired and routine tested per ANSI C37.09.

**Breaker Rating:**

Rated Maximum Voltage: 27 kV RMS

Rated Lightning Impulse Withstand Voltage (BIL): 150 kV peak

Rated Continuous Current: 1200 A RMS

Rated Short Circuit Interrupting Current: 20 kA RMS Sym.

**Auxiliary Switches:**

16 deck snap action rotary switch. Normally this should provide 4 'a' and 4 'b' field adjustable contacts.

**Current Transformers Bushings 1-3-5:**

Special BCT (1-3-5)

**Special Current Transformers Bushings 1-3-5:**

1 Set 1200/5 C800 TR 1.33 ABB # 1B08382A01

**Current Transformers Bushings 2-4-6:**

Special BCT (2-4-6)

**Special Current Transformers Bushings 2-4-6:**

1 Set 1200/5 C800 TR 1.33 ABB # 1B08382A01

**BCT Shorting Type Terminal Blocks:**

Standard shorting type terminal blocks as required.

**BCT Wiring:**

#10 AWG wire. All taps wired to terminal blocks.

**Trip Voltage or Actuator Voltage:**

Trip coils are not applicable for magnetically actuated breakers.

**Close Voltage or Actuator Voltage:**

High Voltage ED2.0 Board with an operating range of 85 - 264 VAC or 77 - 280 VDC.

**Motor Voltage or Operating Voltage:**

125 VDC operating voltage.

**Circuit Protection:**

Fused knife switches provided for control circuits.

## COMMERCIAL AND TECHNICAL TENDER

**Control Terminal Blocks:**

Standard control terminals as required.

**Control Wiring:**

#14 AWG (41 - .010) SIS, fungus proof wire on control circuits.

**Control Wiring Lugs:**

Insulated control wiring lugs provided.

**Wire Markers:**

Brady wire marker sleeves as required.

**Heaters:**

(2) 240 VAC, 375 Watt heaters provided; one for the low voltage compartment and one for the high voltage compartment.

**Thermostats:**

(1) Standard thermostat included. Operating Range: 70°F to 80°F

**Bushing:**

Six ANSI-70 gray Porcelain Bushings. Creep: 27.50 in. (699 mm)  
1.25 in. (32 mm) - 12 THDS copper stud bushing.

**Bushing Terminal:**

Stud to cable clamp #2-1000 MCM connectors

**Mounting Frame:**

One adjustable steel substation mounting frame with galvanized legs and two stainless steel ground pads located on the each side of the unit.

**Protection/Control Relay Control Type:**

Schweitzer Relay

**Control:**

User Defined Special Relay

**Special Control:**

SEL 751A62C1C1C71821330

**Panel Configuration:**

Special panel

**Control Switch:**

Special Control Switch

**Special Control Switch:**

SW ELECTROSW LOR #7804D 125VDC MAN RESET ABB #8027A96H10

**Local/Remote Switch:**

(1) Standard local/remote switch provided.



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**COMMERCIAL AND TECHNICAL TENDER**

**Test Switches:**

(1) ABB FT-1 test switch provided (2 potential, 8 current)

**Digital Meters:**

Special digital meter

**Special Digital Meters:**

Satec PM130 Style PM130PLUS60HZ5ACDC

**Standard Dynamic Accessories:**

120 VAC relay cabinet light mounted inside relay control cabinet.

120 VAC, 1 phase GFI utility outlet mounted inside the relay control cabinet.

Loss of DC supply voltage

Qty 5: Toggle switch for enabling and disabling remote functions ABB # 161A833H07

**ABB Internal Order Entry Info:**

**CID Code:** 9AAC30400486

**Source Location Code:** 9AAE300185

## COMMERCIAL AND TECHNICAL TENDER

### Item 50

**ABB Product ID:** MB25236VVMH5KMZZ02

**Breaker Type:**

Type R-MAG three phase air insulated, magnetically actuated, vacuum circuit breaker. Factory assembled, wired and routine tested per ANSI C37.09.

**Breaker Rating:**

Rated Maximum Voltage: 27 kV RMS

Rated Lightning Impulse Withstand Voltage (BIL): 150 kV peak

Rated Continuous Current: 2000 A RMS

Rated Short Circuit Interrupting Current: 20 kA RMS Sym.

**Auxiliary Switches:**

16 deck snap action rotary switch. Normally this should provide 4 'a' and 4 'b' field adjustable contacts.

**Current Transformers Bushings 1-3-5:**

1 set of 2000/5 C800 Bushing Current Transformers on bushings 1-3-5. Thermal Rating Factor @ 30°C: 2.00. Full Winding Metering Class: 0.3B1.8.

**Current Transformers Bushings 2-4-6:**

1 set of 2000/5 C800 Bushing Current Transformers on bushings 2-4-6. Thermal Rating Factor @ 30°C: 2.00. Full Winding Metering Class: 0.3B1.8.

**BCT Shorting Type Terminal Blocks:**

Standard shorting type terminal blocks as required.

**BCT Wiring:**

#10 AWG wire. All taps wired to terminal blocks.

**Trip Voltage or Actuator Voltage:**

Trip coils are not applicable for magnetically actuated breakers.

**Close Voltage or Actuator Voltage:**

High Voltage ED2.0 Board with an operating range of 85 - 264 VAC or 77 - 280 VDC.

**Motor Voltage or Operating Voltage:**

125 VDC operating voltage.

**Circuit Protection:**

Fused knife switches provided for control circuits.

**Control Terminal Blocks:**

Standard control terminals as required.

**Control Wiring:**

#14 AWG (41 - .010) SIS, fungus proof wire on control circuits.

**Control Wiring Lugs:**

Insulated control wiring lugs provided.

## COMMERCIAL AND TECHNICAL TENDER

**Wire Markers:**

Brady wire marker sleeves as required.

**Heaters:**

(2) 240 VAC, 375 Watt heaters provided; one for the low voltage compartment and one for the high voltage compartment.

**Thermostats:**

(1) Standard thermostat included. Operating Range: 70°F to 80°F

**Bushing:**

Six ANSI-70 gray Porcelain Bushings. Creep: 27.50 in. (699 mm)  
2.00 in. (51 mm) - 12 THDS copper stud bushing.

**Bushing Terminal:**

Special terminal connectors

**Mounting Frame:**

One adjustable steel substation mounting frame with galvanized legs and two stainless steel ground pads located on the each side of the unit.

**Protection/Control Relay Control Type:**

Schweitzer Relay

**Control:**

User Defined Special Relay

**Special Control:**

SEL 751A62C1C1C71821330

**Panel Configuration:**

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**Control Switch:**

Special Control Switch

**Special Control Switch:**

SW ELECTROSW LOR #7804D 125VDC MAN RESET ABB #8027A96H10

**Local/Remote Switch:**

(1) Standard local/remote switch provided.

**Test Switches:**

(1) ABB FT-1 test switch provided (2 potential, 8 current)

**Digital Meters:**

Special digital meter

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Satec PM130 Style number PM130PLUS60HZ5ACDC



## COMMERCIAL AND TECHNICAL TENDER

### Standard Dynamic Accessories:

120 VAC relay cabinet light mounted inside relay control cabinet.

120 VAC, 1 phase GFI utility outlet mounted inside the relay control cabinet.

Loss of DC supply voltage

Qty 5: Toggle switch for enabling and disabling remote functions ABB # 161A833H07

### ABB Internal Order Entry Info:

CID Code: 9AAC30400486  
Source Location Code: 9AAE300185

## Clarifications

1. Section 2.0 Characteristics: The R-MAG breaker uses a magnetically actuated mechanism and not a motor to operate.
2. Section 5.0 Accessories: The R-MAG does not come with a manual closing device.
3. Section 5.0.f Accessories: Inside the live tank portion of the breaker, the entire hi-volt bus and drive linkage is exposed, including vacuum interrupter(s) (VI), contact stem and pull rods which enable easy connection of a Time & Travel Tester. In addition, ABB places a scribe on the contact stem 80 mils from the VI end guide to enable a quick visual inspection of contact wear.