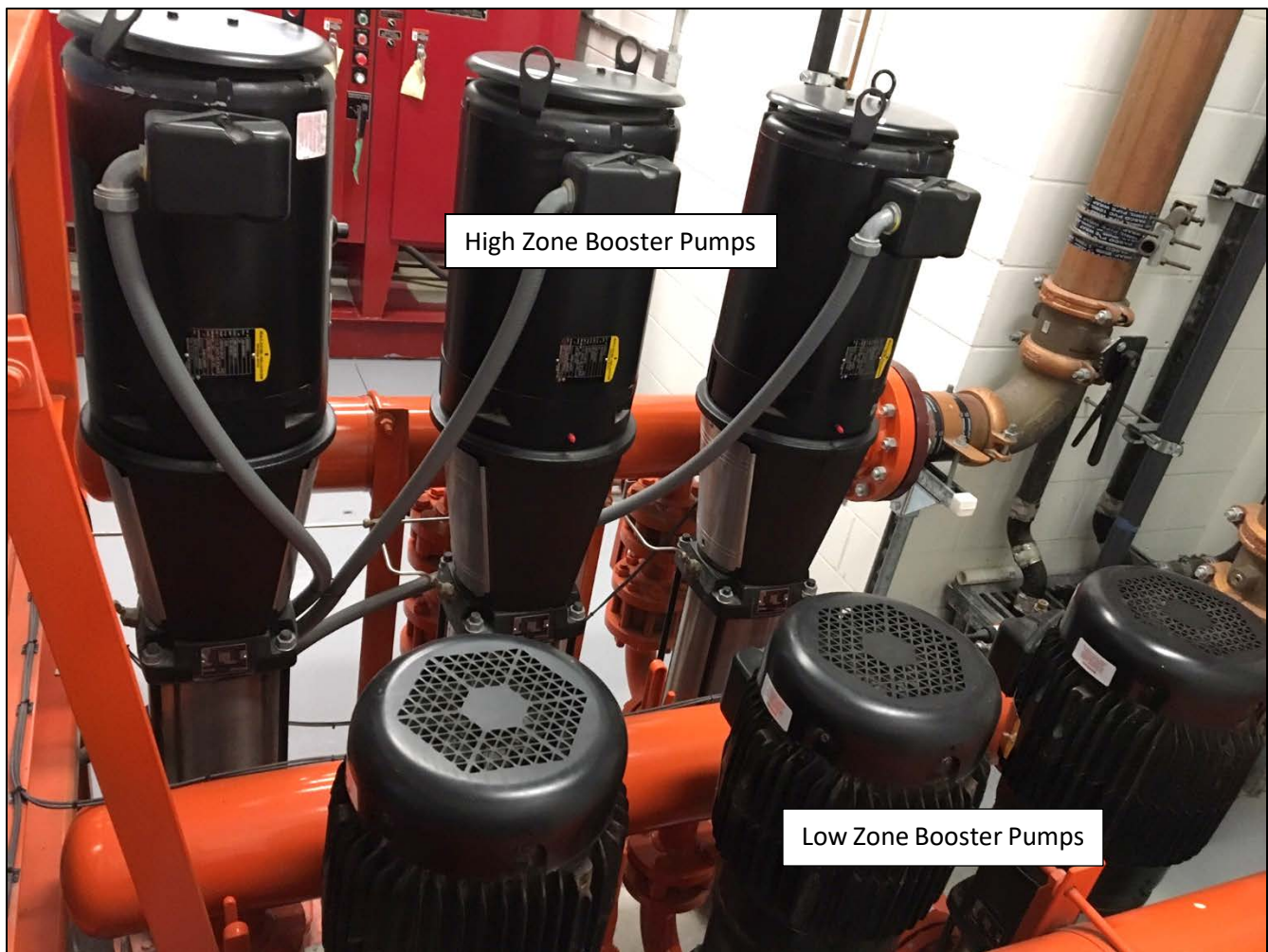


## REQUEST FOR ACTION

|                 |   |                  |   |               |
|-----------------|---|------------------|---|---------------|
| <b>To</b>       | The Collection Board of Directors           |                  |   |               |
| <b>Subject</b>  | Domestic Water Booster Pump VFD Replacement |                  |   |               |
| <b>Preparer</b> | Al Guzman, GM                               |                  |   |               |
| <b>Date</b>     | January 24, 2019                            | <b>For Board</b> | x | <b>Action</b> |
|                 |   |                  |   | <b>Info</b>   |

### EXECUTIVE SUMMARY

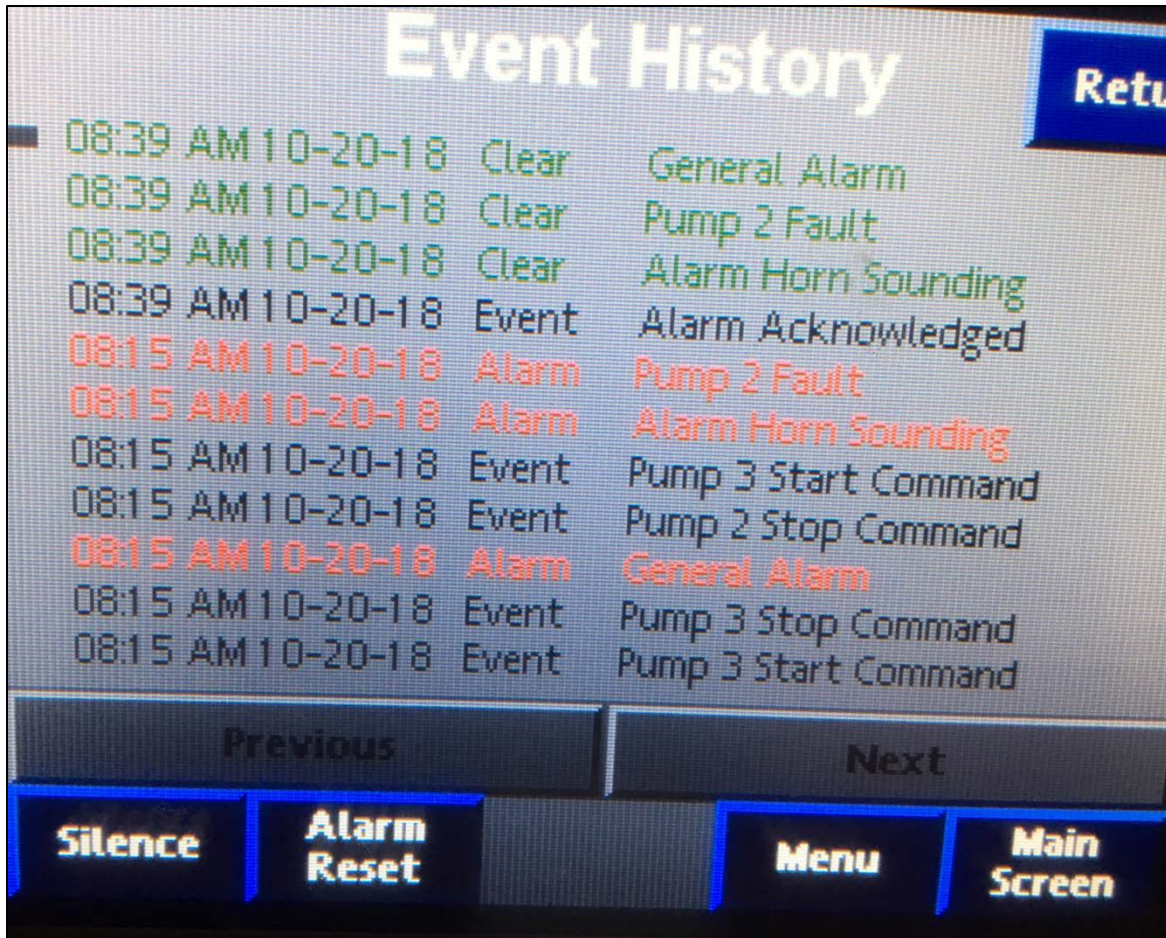
There are 6 domestic water booster pumps in the Tower – 3 for the low zone (floors 1 to 23) and 3 for the high zone (floors 24 – 43). There would always be one pump per zone dedicated to be constantly running. Depending on demand, anywhere from 1 to 3 pumps per zone would be operating.



To reduce wear and tear on any one pump, the pumps were programmed to rotate duty time. For example, there is always one low zone and one high zone pump constantly running. When demand increases, another pump would activate to assist with the load.

The system is programmed to rotate the constantly running low zone and high zone pump.

Beginning in August of 2018, the #2 pump for the high zone started performing poorly. During the rotation cycle, when pump #2 was activated, the pump would fail to start. They system would try several times before bypassing pump #2.



During the next 3 months, several attempts at adjusting the pumps Variable Frequency Drive settings were unsuccessful. The VFD controls the electrical power supplied to the pump. Significant power savings and wear and tear are achieved when using a VFD.

On November 15, 2018, the contractor who performs quarterly maintenance on the system, Pacific Mechanical and Boiler, in collaboration with the system manufacturer, Tigerflow, determined the Variable Frequency Drive (VFD) needed to be replaced. Testing revealed the VFD was not supplying enough power to the high zone #2 pump. If the VFD fails, the pump won't start. Pump #2 was then shut off.



Proposals to replace the High Zone Pump #2 VFD were received from Pacific Boiler and Mechanical as well as Gellert Company.

#### RECCOMENDATION

It is recommended that High Zone Pump #2 VFD be replaced by Gellert Company at a cost of \$4,494.

#### RATIONALE

- 1) Running three pumps would greatly reduce the run time for each if only two pumps were being used. The third pump would share 1/3 of the burden.

- 2) Demand might be more than the two pumps could handle. Water pressure during peak times may not be maintained.
- 3) If we choose to run only two pumps and one of those fail. One pump would not be able to keep up with medium – to high demand.

| Exhibits<br>(If applicable) | Index | Title  |
|-----------------------------|-------|--|
|                             | A     | Replacement Proposal Pacific Boiler and Mechanical |
|                             | B     | Replacement Proposal Gellert Company               |
|                             |       |  |
|                             |       |  |
|                             |       |  |

|                                    |          |  |          |  |             |         |          |        |          |  |           |
|------------------------------------|----------|--|----------|--|-------------|---------|----------|--------|----------|--|-----------|
| <b>FOR BOARD USE ONLY</b>          |          |  |          |  |             |         |          |        |          |  |           |
| <b>CERTIFICATE OF BOARD ACTION</b> |          |  |          |  |             |         |          |        |          |  |           |
| X                                  | Approved |  | Declined |  | Noted       |         | Returned |        | Deferred |  | Withdrawn |
| <b>Stipulations</b>                |          |  |          |  |             |         |          |        |          |  |           |
|                                    |          |  |          |  |             |         |          |        |          |  |           |
| <b>Coordinating Instructions</b>   |          |  |          |  |             |         |          |        |          |  |           |
|                                    |          |  |          |  |             |         |          |        |          |  |           |
| <b>Distribution Instructions</b>   |          |  |          |  |             |         |          |        |          |  |           |
|                                    |          |  |          |  |             |         |          |        |          |  |           |
| Recording Secretary                |          |  |          |  | Action Date | 1/24/19 | RFA No.  | 2-2019 |          |  |           |



**PACIFIC BOILER  
& MECHANICAL INC**

1081 Alahaki St.

Kailua, Hi. 96734

Phone: 808.347.1002

Email: equipmenttech247@outlook.com

# Quote

| Date       | Quote No. |
|------------|-----------|
| 11/20/2018 | 56        |

Fed ID No.: 47-1409062

State ID No.: GE-129-120-0512-01

DUNS: 05-026-9558

Contractors Licence: C-35336

The Collection  
Attn: Al Guzman  
600 Ala Moana Blvd  
Honolulu, HI. 96813

This proposal is good for 60 days

Terms: Invoices are NET 30. Payment must be received within 30 days of the invoice date. A service fee of 1.5% will be charged on all overdue invoices. After 185 days of non-payment, the invoice will be forwarded to a collections agency, which will report the debt to creditors.

| Description   | Rate     | Total             |
|---|----------|-------------------|
| <p>On November 15, 2018, Pacific Boiler &amp; Mechanical Inc. responded to a trouble call report of the high zone booster pump #2 tripping on an unknown fault. Several calls leading up to this date did not pin point the intermittent problem with the #2 pump. On November 15, 2018, we found the VFD drive for the #2 pump not responding to commands from they systems main PLC. Further consultation and testing recommenced by Tigerflow factory confirmed the VFD drive is defective and will need to be replaced. For your consideration Pacific Boiler and Mechanical provides the following proposal.</p> <p>Pacific Boiler &amp; Mechanical will provide all labor and materials necessary to remove the defective VFD drive and replace with new VFD drive including factory authorized start up and testing for:</p> <p>NOTE: Upon approval of proposal lead time will be 4-6 weeks.</p> <p>*** Due to the critical nature of the USTR Section 301 Tariff enacted on July 6, 2018 and the volatility of domestic sourced products we are noticing rapid increases to some manufactured goods. In the event there is a significant increase in the price at the time of acceptance, Pacific Boiler and Mechanical will consult our customers for approval on the additional material cost ***</p> | 5,500.00 | 5,500.00T         |
| Sales Tax   | 4.712%   | 259.16            |
|   | 0.00     | 0.00              |
| <b>Total</b>  |          | <b>\$5,759.16</b> |

Quotation prepared by: Tony Castaldi, Pacific Boiler & Mechanical Inc. Equipment Service Manager/RME.

**ACCEPTANCE**

Name: \_\_\_\_\_

Title: \_\_\_\_\_

Signature: \_\_\_\_\_

Date: \_\_\_\_\_



## QUOTATION

November 29, 2018

Collections  
Attn: Al Guzman

Subject: Booster Pumps  
Al,

We are pleased to offer the following equipment in accordance with your request:

1ea. ACH-550-UH-038A-4, ABB VFD, 25 HP, 460/3/60.  
Labor to remove and replace, setup and test.

**Price: \$4,483.00 ea.**

Price includes freight but does not include tax, delivery usually can be made in 2-3 weeks,  
price is good for 30 days.  
Please contact me if you have any questions.

Yours truly,

A handwritten signature in black ink, appearing to read "Miles Tsubota".

Miles Tsubota  
The Gellert Company  
[miles@gellertco.com](mailto:miles@gellertco.com)  
Direct: (808) 457-1632