NAC Circuit Voltage Drop Calculation **Project Name CMP- Portland Service Center** Date 2/6/2017 Circuit Number Nac#12 Area Covered NAC Source Alarm Voltage 19.1 Wire Resistance Minimum Device Voltage 16 Gauge Per KFt Cable Distance to first appliance 200 14 3.14 **Total Circuit Current** 1.116 14 Wire Gauge for balance of circuit 3.14 Distance Circuit is within limits from Device previous Voltage at Drop from Percent Current device Device source Drop 0.372 18.40 0.70 3.7% Appliance 1 Appliance 2 0.372 50 18.28 0.82 4.3% Appliance 3 0.372 50 18.22 0.88 4.6% **END** 18.22 0.88 4.6% **END** 4.6% 18.22 0.88 18.22 **END** 0.88 4.6% 4.6% **END** 18.22 0.88 **END** 18.22 0.88 4.6% **END** 18.22 4.6% 0.88 **END** 18.22 0.88 4.6% **END** 18.22 0.88 4.6% 4.6% **END** 18.22 88.0 **END** 18.22 0.88 4.6% **END** 18.22 0.88 4.6% **END** 18.22 0.88 4.6% **END** 18.22 0.88 4.6% 4.6% END 18.22 0.88 **END** 18.22 0.88 4.6% **END** 18.22 0.88 4.6% **END** 18.22 0.88 4.6% **END** 18.22 0.88 4.6% **END** 18.22 4.6% 88.0 **END** 18.22 0.88 4.6% **END** 18.22 88.0 4.6% **END** 18.22 0.88 4.6% 1.116 300 Totals

Appliance circuit voltage drop calculations start at "end of battery life" as NAC Source Alarm Voltage and use 20% below nameplate rating for Minimum Appliance Voltage.

Note. Wire resistance is based on the 2014 NEC Table 8 Uncoated DC resistance. All resistance is based on solid conductors