



# Proposal

FROM:  
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Job Number: 36365  
Date: 10/29/24

## Summary:

Moore Heating was contacted to evaluate the current heating and cooling system to provide budgetary numbers for replacement and possible efficiency upgrades. There are several ways that this could possibly be accomplished however a mechanical engineer would be required in order to dive deeper into what would be needed to accomplish both. The biggest challenge in this retrofit is going to be access into the mechanical room. The building was built around the current units and would be near impossible to replace without extensive construction to remove and reset similar units. Our goal is to accomplish this in the least invasive way. With option 1, we would replace the current air handlers, duct furnaces and chillers with 2 package rooftop units, one for heating and one for cooling. This would get the equipment on the roof for easier replacement in the future and, aside from structural changes to support the weight, would be the quickest option to complete. We did a similar system to this for Enstar last year. it's likely that you would see about a 10% increase in efficiency on both heating and cooling from the current system and it would operate similar to the current system with the VAV boxes to control cooling in the space. Additionally, we could do this in two phases if budget requires it. The downside is that we would be maintaining the existing function of the perimeter heating ducts which is an inefficient method because they are designed to heat the building continuously while the AC counter acts to maintain a comfortable temperature. Essentially, they are fighting each other 24/7. Additionally, systems like this are imperative to have a balanced pressure through the duct system in order to provide even flow to every suite. From what was described to us, this is not the case currently and the building has hot and cold spots. This is likely due to renovations changing the original duct design and/or occupants adjusting dampers in the ceiling to get more airflow to their units. Option 2 would be to install (1) small furnace and (1) small air conditioner with dedicated ducting for each suite, located in the mechanical room. This option would remove the need for the perimeter heating and both heating and cooling would be done with modifications to the cooling duct system. The VAV boxes would also be removed, which eliminates a point of failure/maintenance. By doing this, we are also able to install high efficiency +95%, multistage furnaces and high SEER, multi stage air conditioners. These options would increase your efficiency by about 40% with extensive redundancy and staging.

**Equipment Demo:** \$38,000.00

**Option 1A)** York 40-Ton cooling only RTU w/ 4 stage compressors and VFD controls and duct modifications to existing cooling system: \$195,000.00

**Option 1B)** York 620k BTU Heating RTU w/ 4.4:1 turn down modulating heat and duct modifications to existing heating system: \$190,000.00

**VAV Damper)** Includes retrofitting damper, running control wire and installing 0-10v thermostats: \$78,000.00

**Option 2a)** 15 Lennox ML296V, 70k BTU, 2 stage, variable speed blower 96% efficient furnaces and 14 Lennox ML18XC2, 2-Ton, 2 stage, 18 SEER air conditioners. \$470,000

**Option 2b)** 15 Lennox SLP99V, 70k BTU, modulating, variable speed blower 99% efficient furnaces and 14 Lennox SL25XCV, 2-Ton, variable capacity, 26 SEER air conditioners. \$570,000.00

## Other Requirements

Mechanical Engineering: \$TBD  
Electrical Engineering: \$TBD  
Structural Engineering: \$TBD  
Electrical contractor: \$TBD  
Structural contractor: \$TBD  
Controls contractor: \$TBD  
Roofing contractor: \$TBD  
Permitting: \$TBD



Action Plan Timeline	DATES
Notification of award	02/15/21
Equipment submittals provided to owner	02/17/21
Approved submittals, equipment ordered	02/19/21
MOA Permit application submitted	02/22/21
Equipment delivered to anchorage	03/19/21
Installation (systems down 2-3 days)	04/01/21
MOA Final inspection completed; Walkthrough with owner	04/02/21