

**TEMPORARY COOLING OPTIONS**

OPTION	ADDITIONAL CONSTRUCTION COST*	TEMPORARY ENERGY COST	ENGINEERING COST	ATC COST	TOTAL COST*	COMMENTS	
<b>1</b>	As designed with (4) TACU's with waste heat discharging into plenum. Operate chiller(s) and (4) AHU systems 24/7.	\$0	\$25,000 – \$39,000	\$0	?	\$25,000 – \$39,000	1. Temporary increase in energy cost. 2. Are there other temporary energy reduction measures (220kW)
<b>2</b>	As designed with (4) TACU's with waste heat discharging into plenum. Operate AHU's 24/7 but only run chillers during occupied hours (or free cooling)	\$18,000 (potential delay claims) (demobilize / mobilize )	\$15,000 – \$20,000	\$0	?	\$33,000 – \$38,000	1. Temporary increase in energy cost. 2. Are there other temporary energy reduction measures (220kW)
<b>3</b>	Duct condenser inlet & discharge. to exterior	Ductwork: (8) @ \$250 = \$2,000 Window Removal & Replace: (8) @ \$500 = \$4,000 Plywood, etc: (8) @ \$320 = \$2,560 TOTAL: \$8,560	\$3,000 – \$6,000	\$3,000	\$1,000	\$15,560 – \$18,560	1. Water infiltration potential. 2. Shutdown of shaft will not affect the operation of the TACU's. 3. Long runs of ductwork may reduce system capacity.
<b>4</b>	Duct condenser discharge to exterior thru a window but inlet from plenum.	Ductwork: (4) @ \$250 = \$1,000 Window Removal & Replace: (4) @ \$500 = \$2,000 Plywood, etc: (4) @ \$320 = \$1,80 TOTAL: \$4,280	\$5,000 – \$8,000	\$3,000	\$1,000	\$13,280 – \$16,280	1. Water infiltration potential. 2. Shutdown of shaft will not affect the operation of the TACU's. 3. Long runs of ductwork may reduce system capacity.
<b>5</b>	Avoid using TACU's and instead pipe permanent units from another floor	\$15,000 - \$20,000	\$0	\$ 5,000	\$0	\$20,000 – \$25,000	1. Time delay impact?

\*Construction Costs and Fees are estimated costs by the engineer and are subject to contractor proposal costs & scope verification.