WHITE **PAPER**

CITIZENS BANK

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OVERVIEW OF CHALLENGE IN THE PROJECT

Citizens Bank – one of the largest banks in the USA was planning to open a new branch in an existing commercial building in Marshfield, Massachusetts. The place was a compact white box space with existing electrical, water, and sanitary services provided by the base building.

We faced three main challenges while designing this commercial project-

- 1. The client was looking for a lowcost design by utilizing the existing services and existing rooftop unit provided by the base building.
- 2. Design the MEP system by running the services from the existing service location to the new space, keeping the other existing commercial stores in operation.
- 3.To fit the MEP system equipment in a limited space.

While going over the floor plan and the building's electrical power plans, we also realized that the existing electrical service was undersized considering the new Citizen bank's power requirements.

YOUR ONE STOP SHOP FOR ALL MEP DESIGN NEEDS DESIGNED & CONCEPTUALIZED BY

NY-ENGINEERS

OUR CUSTOM SOLUTION

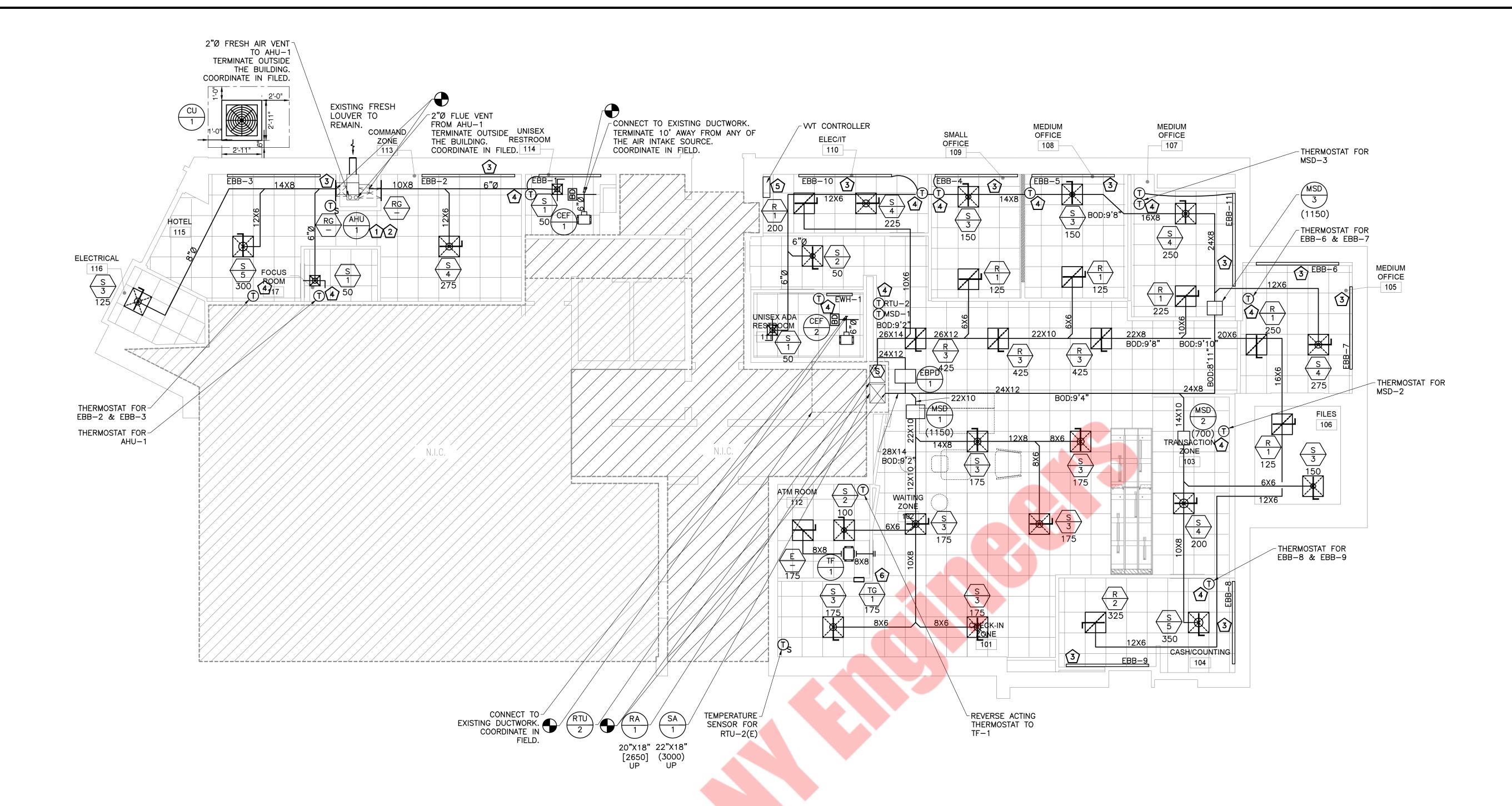
Our team of design experts with vast experience in designing commercial projects found the best possible routing for the sanitary and domestic water piping without affecting the operations of other stores. Existing ductwork was utilized to save cost.

Heating and cooling load, domestic water, sanitary, and electrical power load were calculated and satisfied within available existing load and rooftop unit in compliance with all local and energy conservation requirements. A compact ceilingmounted water heater was provided to fit in a small space and avoid additional space requirements.

We saved the cost and time for the client by providing a quick, low-cost, and clash-free design within 2 weeks resulting in a quick construction of the Citizens bank.

Area - 3,500 Sq. Ft.

Services Used - Electrical & Plumbing Fire Protection



KEY NOTES:

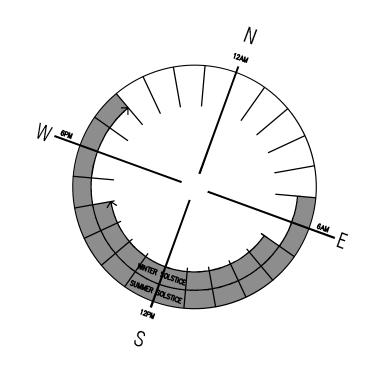
- 1 CD TO NEAREST FLOOR DRAIN W/ AIR GAP FITTING. COORDINATE W/PLUMBING CONTRACTOR.
- PROVIDE HORIZONTAL SLOPE IN THE DIRECTION OF DISCHARGE OF NOT LESS THAN 1/8 UNIT VERTICAL IN 12 UNITS HORIZONTAL.
- ELECTRIC BASEBOARD AND AC UNIT SHALL HAVE NECESSARY COMPATIBILITY TO COMMUNICATE WITH BMS. COORDINATE WITH BMS CONTRACTOR FOR CONTROLS.
- COORDINATE FINAL LOCATION OF THERMOSTAT WITH ARCHITECT.
- WT CONTROLLER SHALL BE COMPATIBLE WITH CITIZENS BMS SYSTEM. COORDINATE WITH CITIZENS CONTROL ENGINEER/CONTRACTOR FOR COMPATIBILITY BEFORE ORDER/PURCHASE.
- TRANSFER GRILLE SHALL BE LOCATED BELOW FALSE CEILING. CONTRACTOR TO CONFIRM FINAL LOCATION WITH ARCHITECT.

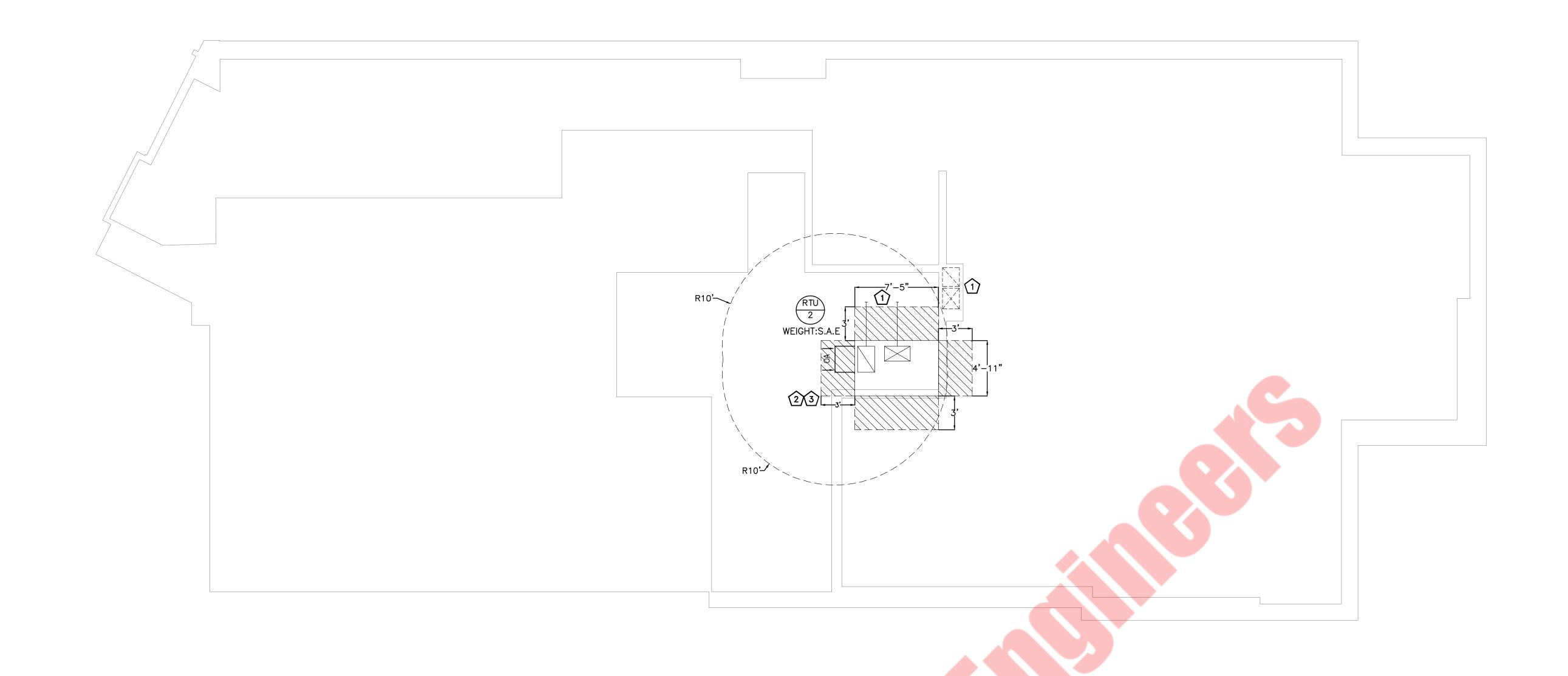
GENERAL NOTES:

- I. PROVIDE NECESSARY PROTECTIVE DEVICES WHERE REQUIRED AND IN STRICT ACCORDANCE WITH OSHA AND ICRA REGULATIONS.
- 2. AVOID FREE DUST MOVEMENT AND DIRT MIGRATING TO OCCUPIED AREAS OF THE BUILDING.
 BLANK OFF ANY RETURN AIR GRILLES/ DUCTS IN THE WORK AREA. PROVIDE TEMPORARY
 EXHAUST FANS, DUCTED DIRECTLY TO OUTDOORS, TO MAINTAIN NEGATIVE PRESSURE WITHIN THE
 WORK AREA.
- 3. KEEP ALL ADJOINING AREAS ADJACENT TO THE WORK AREAS CLEAN AND FREE OF DEBRIS.
- 4. REPAIR/ REPLACE EXISTING EQUIPMENT/ MATERIALS NOT SCHEDULED OR NOTED TO BE DEMOLISHED BUT BECOME DAMAGED DURING THE PROGRESS OF THE WORK, MAKE ANY AND ALL SUCH REPAIRS, REPLACEMENTS, MODIFICATIONS TO RESTORE THE DAMAGED ITEMS TO THEIR ORIGINAL CONDITIONS AT THE TIME OF DAMAGE, TO THE SATISFACTION OF AND AT NO ADDITIONAL COST TO THE OWNER.
- 5. COORDINATE CUTTING, PATCHING OF EXISTING ROOF, WALLS, CEILINGS, AND FLOORS AFFECTED BY MECHANICAL DEMOLITION WITH G.C.
- 6. ELECTRICAL CONTRACTOR TO PROVIDE SINGLE GANG BOX AT 48" WITH 3/4 CHASE TO CEILING SPACE FOR BMS SENSORS, FIELD VERIFIED BY CITIZENS REPRESENTATIVE. CONTRACTOR SHALL COORDINATE THE LOCATION AND PLACEMENT OF BMS PANEL BEFORE INSTALLATION. SIZE OF THE PANEL DEPENDS ON DEVICE'S COUNT, SO IT SHALL BE VERIFIED AND LOCATED ADJACENT TO ELECTRICAL PANELS.
- 7. PANEL REQUIRES ONE DEDICATED 120 V 20 AMP CIRCUIT.
- 8. BMS SYSTEM REQUIRES EACH CONTROLLED DEVICE TO HAVE A HOME RUN, FROM EACH DEVICE OR ZONE, TO THE BMS PANEL; INTERRUPTING THE LINE SIDE.
- 9. NECESSARY CONTRACTORS AND RELAYS MUST BE CONSIDERED FOR ALL ELECTRICAL HEATERS IN BMS PANELS. ALL HEATERS (EWH AND EBB) SHALL BE CONTROLLED THROUGH BMS CONTROL

MECHANICAL GENERAL NOTES:

- □ EXACT LOCATION OF TEMPERATURE SENSORS TO BE COORDINATED IN FIELD. COORDINATE WITH ELECTRICAL/CONTROLS CONTRACTOR.
 □ ALL HVAC EQUIPMENT SHALL BE CONTROLLED VIA
- EMERSON/CCAM. PROVIDE ALL NECESSARY EQUIPMENT FOR BMS TIE—IN. COORDINATE WITH ELECTRICAL/CONTROLS CONTRACTOR.





KEY NOTES:

- EXISTING DUCTWORK FROM THE SHAFT TO BE REMAIN SAME AND TO BE REUSED. CONTRACTOR TO FIELD VERIFY.
- (2) CONTRACTOR TO FIELD VERIFY EXACT LOCATION OF AN EXISTING RTU.
- ALL FRESH AIR INTAKES SHALL BE LOCATED A MINIMUM OF 10' FROM ANY SANITARY VENT, EXHAUST FAN DISCHARGE AND FLUE OF OTHER GAS FIRED EQUIPMENT. WHEN NECESSARY, EXTEND VENT OR PROVIDE ADDITIONAL FRESH AIR INTAKE DUCTWORK AS DIRECTED BY THE ENGINEER.

