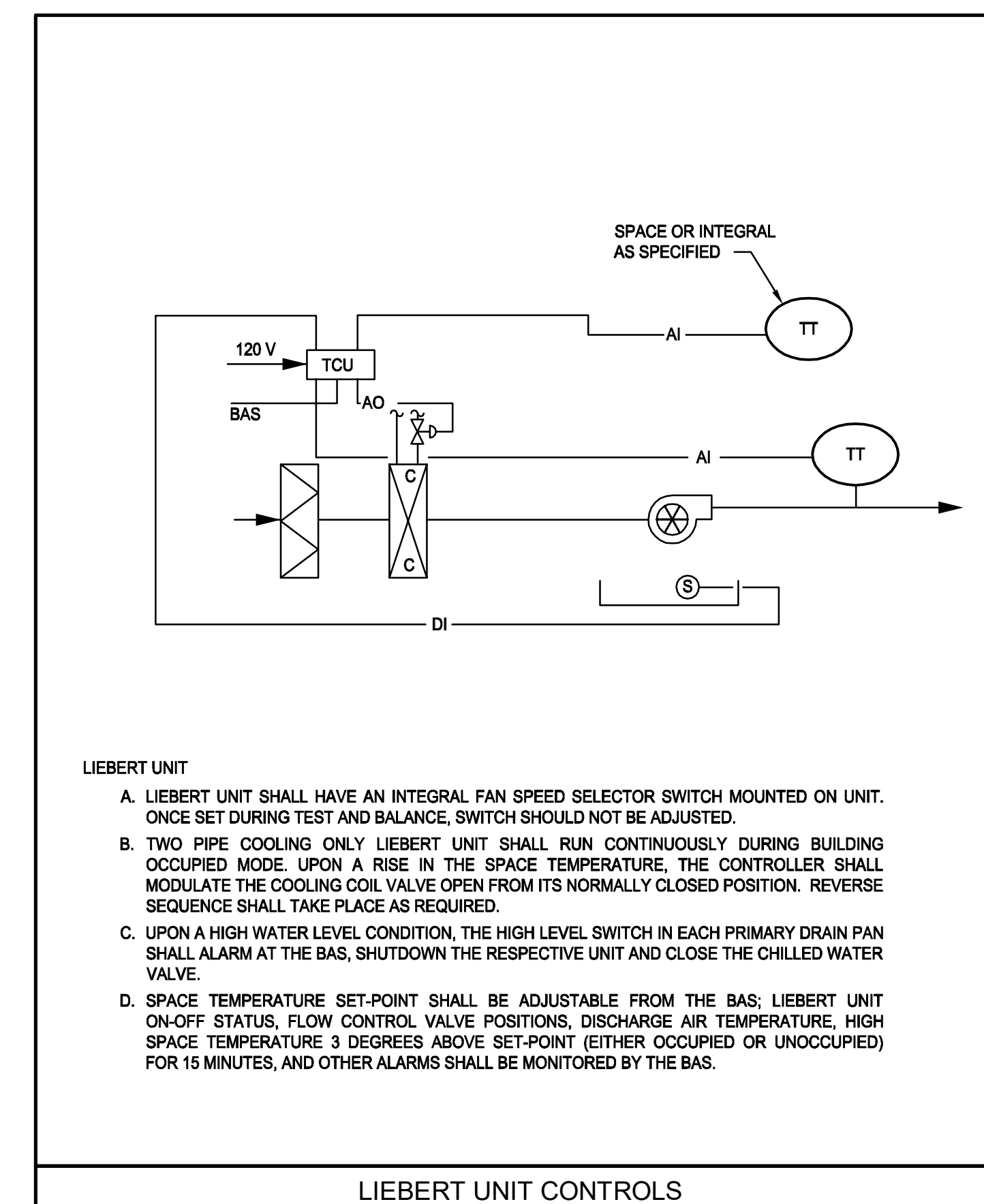
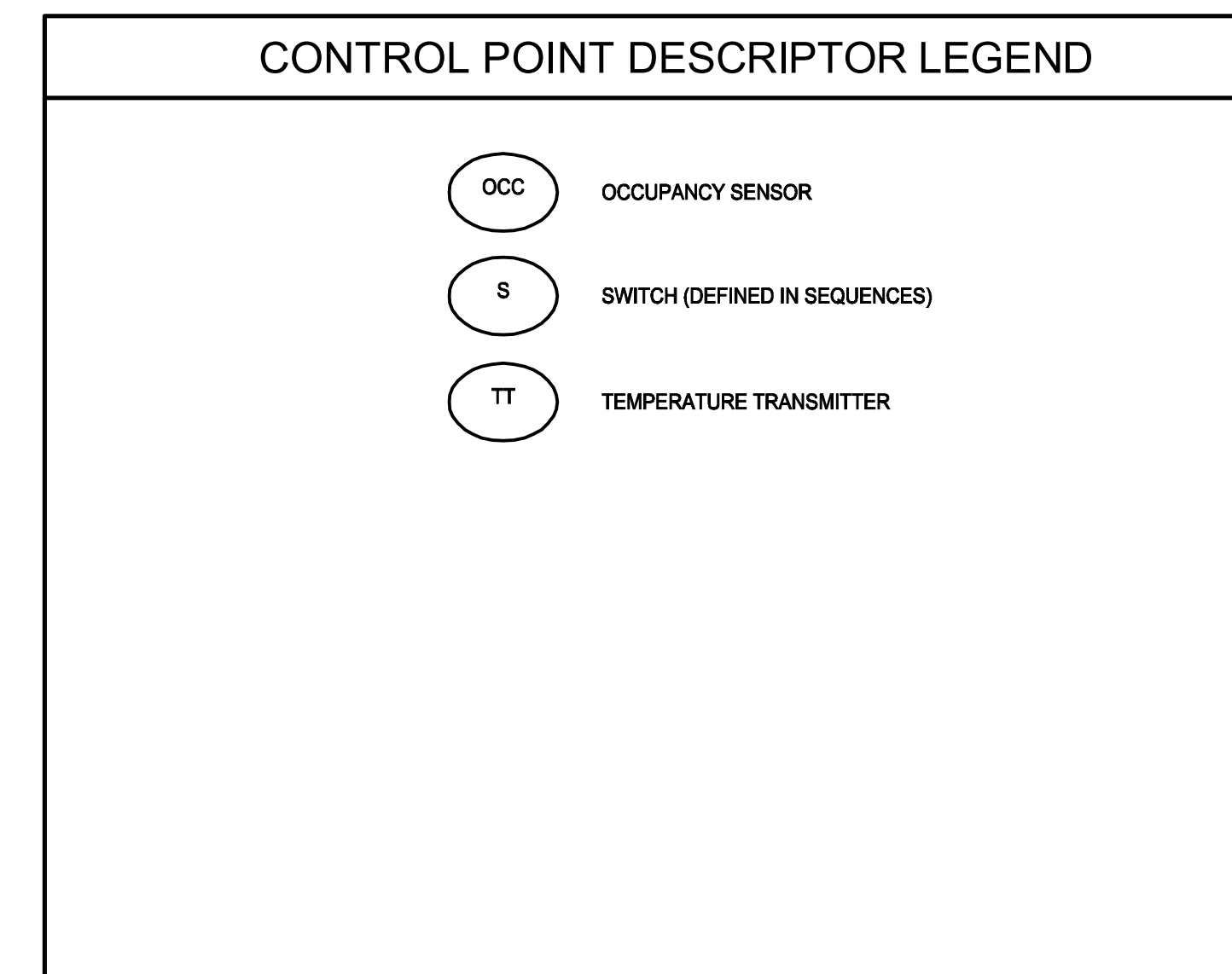
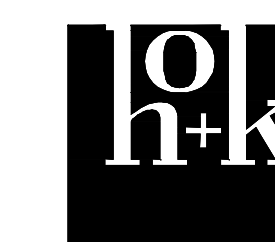


- A. THE TERMINAL UNITS ARE CONTROLLED INDEPENDENT OF SYSTEM PRESSURE FLUCTUATIONS BY TWO APPLICATION SPECIFIC CONTROLLERS (ASC) USING ELECTRIC ACTUATION. THE SPACE SERVED BY THE TERMINAL UNITS IS CONTROLLED IN OCCUPIED AND UNOCCUPIED MODES. THE TRACKING TERMINAL UNITS SHALL OPERATE IN CONCERT TO MAINTAIN THE REQUIRED AIRFLOW DIFFERENTIAL BETWEEN SUPPLY AND EXHAUST.
- B. OCCUPIED MODE:
  - 1. THE SUPPLY AND EXHAUST TERMINAL UNITS SHALL BE CONTROLLED WITHIN THE SCHEDULED MINIMUM AND MAXIMUM OCCUPIED AIR VOLUMES. THE EXHAUST SHALL TRACK THE SUPPLY, WHERE AIR CASCADES INTO LAB AREAS, THE EXHAUST TERMINAL UNIT IS NOT PRESENT.
  - 2. IF THE SPACE TEMPERATURE IS BELOW SET-POINT THE SUPPLY AIRFLOW SHALL MODULATE FROM THE MAXIMUM TO MINIMUM AIRFLOW SET-POINTS. IF THE SPACE TEMPERATURE IS STILL BELOW SET-POINT AT THE MINIMUM AIRFLOW, THEN THE SECONDARY CHILLED WATER CONTROL VALVE FOR THE INDUCTION UNITS (ONE CONTROL VALVE FOR EACH ROOM) SHALL MODULATE CLOSED. UPON A FURTHER DROP IN SPACE TEMPERATURE BELOW SET-POINT AT NO SCHW FLOW, THEN THE REHEAT COIL HOT WATER CONTROL VALVE SHALL MODULATE OPEN TO RESET THE SUPPLY AIR TEMPERATURE UPWARDS IN 1 DEGREE INCREMENTS (APPLICABLE TO CAFE SEATING AREA ONLY). UPON A RISE IN SPACE TEMPERATURE SET-POINT THE REVERSE SEQUENCE SHALL OCCUR.
  - 3. WHERE MULTIPLE ROOMS SHARE A COMMON SUPPLY AIR TERMINAL, THE SPACE TEMPERATURE SHALL BE BELOW SET-POINT IN EVERY ROOM PRIOR TO REDUCING AIRFLOW.
  - 4. WHERE LIEBERT UNITS SERVE AN AREA IN PLACE OF INDUCTION UNITS, THESE UNITS FOLLOW THE SEQUENCE DESCRIBED ELSEWHERE.
  - 5. THE SPACE AIRFLOW SHALL BE RESET FROM THE UNOCCUPIED MODE TO THE OCCUPIED MODE OVER A 5 MINUTE TIME PERIOD.
- C. UNOCCUPIED MODE:
  - 1. THE TEMPERATURE SET-POINT SHALL CORRESPOND TO THE UNOCCUPIED MODE.
  - 2. THE AIRFLOW SET-POINT SHALL BE ALLOWED TO REDUCE FROM THE SCHEDULED "OCCUPIED MINIMUM" SET-POINT TO THE SCHEDULED "UNOCCUPIED" SET-POINT IN THE EVENT THE UNOCCUPIED SET-BACK TEMPERATURE IS SATISFIED. THE AIRFLOW SHALL BE RESET OVER A 5 MINUTE TIME PERIOD (ADJUSTABLE).
  - 3. THE OCCUPIED AND UNOCCUPIED MODES SHALL BE DETERMINED BASED ON TIME OF DAY, UTILIZING A SCHEDULE COORDINATED WITH THE OWNER. LOCAL LIGHTING SYSTEM OCCUPANCY SENSORS SHALL OVERRIDE OPERATION DURING THE UNOCCUPIED HOURS OF OPERATION, UTILIZING A DRY CONTACT PROVIDED WITH THE OWNER. LOCAL LIGHTING SYSTEM OCCUPANCY SENSORS (NOT APPLICABLE TO CORRIDORS, STAIRS, TOILET ROOMS, STORAGE ROOMS, OR PANTRIES). WHERE MULTIPLE ROOMS SHARE A COMMON SAV TERMINAL, RESET SHALL OCCUR IF ANY ONE OF THE OCCUPANCY SENSORS CALLS FOR RESET.
  - 4. IF THE SPACE TEMPERATURE RISES ABOVE SET-POINT AT THE UNOCCUPIED AIRFLOWS FOR SUPPLY AND EXHAUST, THE SUPPLY AIRFLOW TO THE INDUCTION UNITS SHALL AUTOMATICALLY RESET TO THE OCCUPIED MODE. THE EXHAUST AIRFLOW FOR THE ROOM INCREASES BY THE SAME AMOUNT.
  - 5. WHERE MULTIPLE ROOMS SHARE A COMMON SUPPLY AIR TERMINAL, IF THE SPACE TEMPERATURE RISES ABOVE SET-POINT IN ANY OF THE SPACES AT THE UNOCCUPIED AIRFLOWS FOR SUPPLY AND EXHAUST, THE SUPPLY AIRFLOW TO THE INDUCTION UNITS IN ALL ROOMS SHALL RESET TO OCCUPIED MODE. THE EXHAUST AIRFLOW INCREASES BY THE SAME AMOUNT.



Project:  
**JOINT HEALTH SCIENCES CENTER - CAFE FITOUT**

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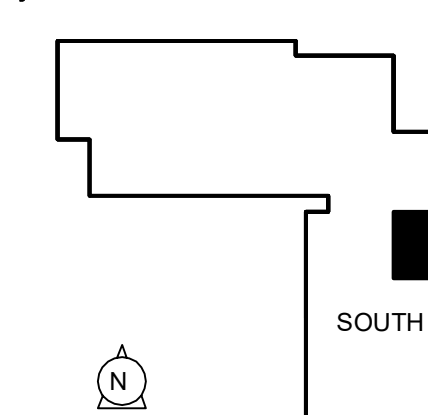


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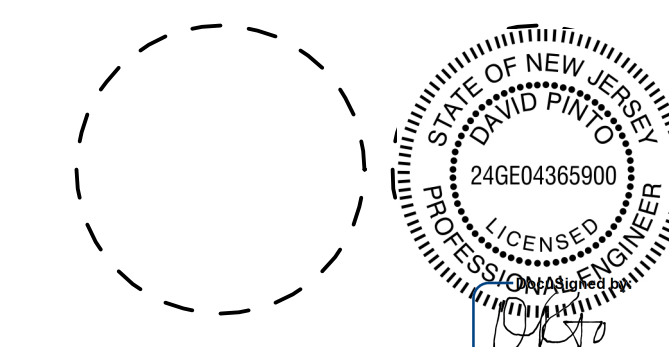
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Key Plan



Professional Seals



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Drawn by: GP Reviewed by: BB  
Project No: 16.07011.12

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Sheet Title  
**HVAC CONTROLS**