

MULTI-SPLITS CONTROL SEQUENCE

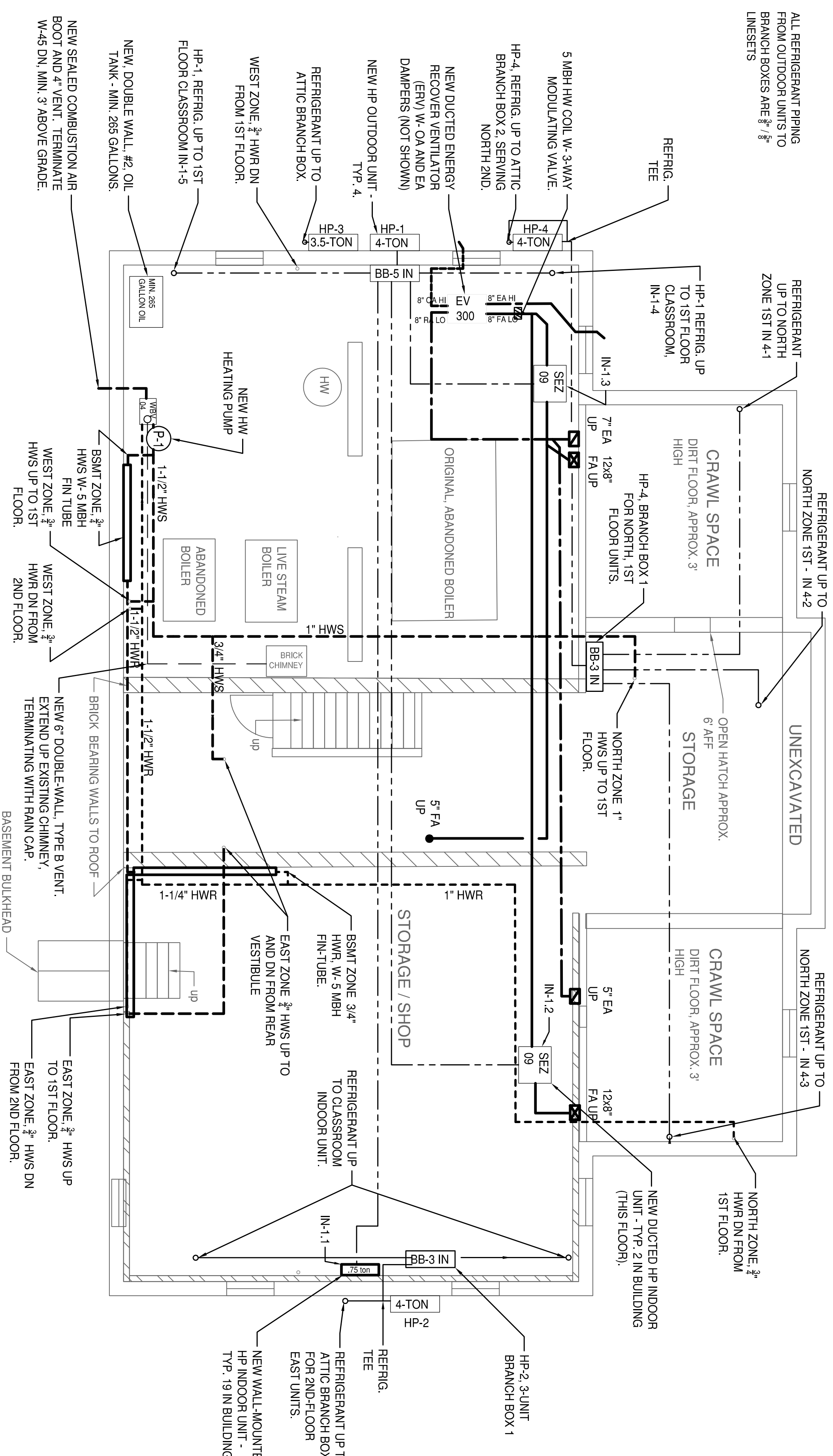
- MULTI-SPLIT HP's FACTORY PROVIDED WITH WIRELESS. REMOTE CONTROLS, TO CONTROL INDOOR UNIT FROM WITHIN THE ROOM. MOUNT ALL WIRELESS CONTROLS ON THE WALL, SO THEY ARE NOT LOST. HVAC TO PROGRAM THE CONTROLS AS FOLLOWS.
- MULTI-SPLIT INDOOR UNIT FAN SHALL RUN ON A CALL FOR HEAT OR COOLING, AND SHALL OTHERWISE BE OFF.
- MULTI-SPLIT OUTDOOR UNITS SHALL RUN ON A CALL FOR HEAT OR COOLING FROM ONE OF THEIR RESPECTIVE INDOOR UNITS, AND SHALL OTHERWISE BE OFF.
 - ANY SINGLE INDOOR UNIT CALL FOR HEATING SHALL OVER-RIDE ANY AND ALL CALLS FOR COOLING. OUTDOOR UNIT WILL ONLY GO INTO COOLING WHEN ALL ZONES NEEDING HEAT ARE SATISFIED.
- ROOM SETPOINTS SHALL AUTOMATICALLY SET-BACK (HEATING) OR UP (COOLING) 5 DEG. F IN UNOCCUPIED MODE. OCCUPIED SCHEDULE PER COMMUNITY ACTION.

BOILER SYSTEM SEQUENCE

- THE BOILER SHALL BE LOCKED OUT WHEN THE OUTSIDE AIR TEMPERATURE IS 72 F (USER ADJUSTABLE) OR ABOVE.
- BOILER SHALL OTHERWISE CYCLE ON AND OFF ON ITS INTERNAL CONTROLS, TO MAINTAIN ITS WATER RESERVOIR TEMPERATURE AT THE (USER-ADJUSTABLE) SETPOINT OF 170 F.
- HW PUMP SHALL BE OFF, AND ALL ZONE VALVES SHALL BE CLOSED, EXCEPT ON A CALL FOR HEAT.
- CALL FOR HEAT:
 - WHEN ANY HP OUTDOOR UNIT IS OPERATING IN HEATING MODE, THE HW ZONE CORRESPONDING TO THAT OUTDOOR UNIT (BASEMENT, EAST, WEST OR NORTH) SHALL ALSO OPERATE. HW PUMP SHALL RUN, AND CORRESPONDING ZONE VALVE SHALL OPEN.
 - ONCE ENABLED, SYSTEM PUMP WILL VARY PUMP SPEED ON ITS OWN INTERNAL CONTROLS, TO MAINTAIN APPROXIMATE CONSTANT PRESSURE DROP - INCREASING SPEED / GPM AS ZONE VALVES OPEN, AND DECREASING SPEED / GPM AS THEY CLOSE.
 - HEAT PUMPS WILL PROVIDE SUPPLEMENTARY HEATING, AND INDIVIDUAL ROOM TEMPERATURE CONTROL, WHERE ANY ROOMS NEEDS VARY FROM THE MAIN ZONE.
- CALL FOR COOLING:
 - IF ALL 4 HP OUTDOOR UNITS ARE OPERATING IN COOLING MODE, THE BOILER AND HW PUMP SHALL BE OFF, AND ALL HW ZONE VALVES SHALL CLOSE.

ERV CONTROLS SEQUENCE

- ERV START-STOP:
- THE ERV SHALL NOT OPERATE, AND ALL ERV DAMPERS SHALL BE CLOSED DURING UNOCCUPIED MODE.
 - THE ERV SHALL OPERATE CONTINUOUSLY DURING OCCUPIED MODE. THE ERV SHALL START-UP AS FOLLOWS:
 - THE ERV'S OA AND EA MOTORIZED DAMPERS WILL OPEN,
 - WHEN THE FIELD-PROVIDED DAMPER END-SWITCHES ARE BOTH MADE, THE ERV AND FA FANS WILL START UP.
 - HEATING: ERV DISCHARGE THERMOSTAT SHALL MODULATE THE 3-WAY HW VALVE TO MAINTAIN A CONSTANT (USER-ADJUSTABLE) DISCHARGE TEMPERATURE. RECOMMENDED INITIAL SETTING: 68 DEG. F.
 - COOLING: ERV HW VALVE TO CLOSE IF THE BASEMENT OUTDOOR UNIT IS OPERATING IN COOLING MODE.
 - DUCTED INDOOR UNIT IN-1-2 SHALL CYCLE THE HEAT PUMP OUTDOOR UNIT ON AND OFF TO MAINTAIN THE (USER-ADJUSTABLE) COOLING SETPOINT IN ROOM 1-2 - NURSING. INITIAL SETPOINT: 74 DEG. F.
 - DUCTED INDOOR UNIT IN-1-3 SHALL CYCLE THE HEAT PUMP OUTDOOR UNIT ON AND OFF TO MAINTAIN THE (USER-ADJUSTABLE) COOLING SETPOINT IN 25A - 2ND FLOOR STORAGE.



<p>BASEMENT PLAN WITH HP OUTDOOR UNITS</p> <p>COMMUNITY ACTION HEAD START HVAC UPGRADES 34 CENTRAL ST TURNER'S FALLS, MA 01376</p> <p>ENGINEER SENSIBLE SOLUTIONS 64 KNIGHTLY RD HOLEY, MA. TEL: (413) 548-5583 CELL: (413) 427-7290 PO BOX 905 BRATTLEBORO, VT 05302</p>		
<p>DRAWING TITLE BASEMENT PLAN WITH HP OUTDOOR UNITS</p>	<p>DRAWING NO. H4</p>	
<p>SCALE AS SHOWN</p>	<p>DATE MAY, 2022</p>	