

**CITY OF STANTON**  
**CITY HALL & POLICE STATION**  
**STANTON, KENTUCKY**

| DATE | REVISION | BY |
|------|----------|----|
|      |          |    |
|      |          |    |
|      |          |    |
|      |          |    |

PROJECT NO. 4065-01  
DESIGNED BY TBM  
DRAWN BY TBM  
CHECKED BY  
REVIEWED BY MCG  
DATE JUNE 2015  
SCALE 1/4" = 1'-0"

**MSE**

MAYES, SUTHERTH & ELLEREDGE, INC.  
MECHANICAL ENGINEERS

Phone: (859) 225-5884  
Fax: (859) 223-2807

624 Wellington Way  
Lexington, KY 40503

DRAWING NO.  
**M-1**

SHEET 1 OF 1

| MINI-SPLIT AIR CONDITIONER |                   |                  |                  |           |           |     |            |      |     |      |            |
|----------------------------|-------------------|------------------|------------------|-----------|-----------|-----|------------|------|-----|------|------------|
| OUTDOOR INVERTER HEAT PUMP |                   |                  |                  |           |           |     |            |      |     |      |            |
| MARK                       | FUJITSU MODEL     | COOLING (BTU/HR) | HEATING (BTU/HR) | MIN. SEER | MIN. HSPF | CFM | ELECTRICAL |      |     |      | REMARKS    |
|                            |                   |                  |                  |           |           |     | VOLTS      | FLA  | MCA | MOCP |            |
| OU-1/OU-1                  | AOU12RFLC/AU12RFL | 12,000           | 16,000           | 21.9      | 12.2      | -   | 240/10     | 13.4 | 15  | 15   | 1, 2, 3, 4 |
| OU-2/OU-2                  | 9RLFV             | 9,000            | 12,000           | 23.0      | 11.0      | -   | 240/10     | 7.5  | 15  | 15   | 2, 3, 5    |

**REMARKS:**

- CEILING CASSETTE UNIT TO MOUNT IN 24 BY 24 GRID.
- FURNISH HARD WIRED WALL MOUNTED THERMOSTAT.
- FURNISH UNIT FOR HEATING AND COOLING OPERATION.
- WITH INTEGRAL CONDENSATE PUMP.
- WALL CASSETTE UNIT.

COOLING CAPACITIES ARE BASED ON 80°F/67°F EAT AND 95°F OA.  
PERFORMANCE DATA BASED ON AHRI STANDARD 210/240  
PERFORMANCE DATA BASED ON 60 FT REFRIGERANT LINE LENGTHS.

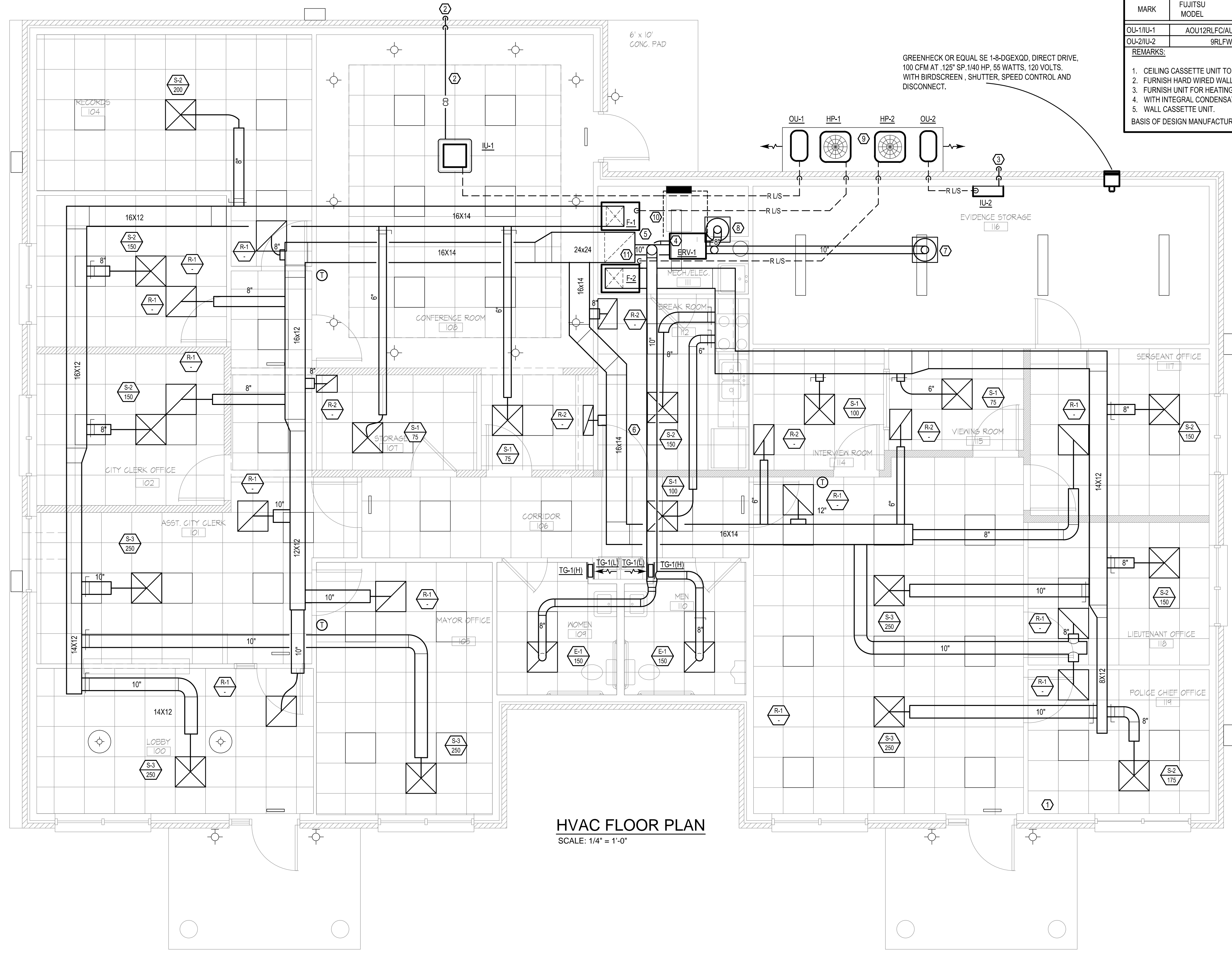
BASES OF DESIGN MANUFACTURER IS FUJITSU. ADDITIONAL ACCEPTABLE MANUFACTURERS ARE LG, DAIKIN, MITSUBISHI, SANYO, OR EQUAL.

**SHEET NOTES**

- ENERGY RECOVERY UNIT TO BE INNERLOCKED WITH LIGHTS IN THIS ROOM AND WILL BE ON WHEN LIGHTS ARE ON, OFF, WHEN LIGHTS ARE OFF. MECHANICAL CONTRACTOR TO COORDINATE WITH ELECTRICAL CONTRACTOR FOR INSTALLATION OF A UNIT MOUNTED RELAY FOR CONTROL OPERATION.
- PIPING SHALL BE 1 1/2" PVC, TRANSITION TO 1" COPPER AT EXTERIOR OF BUILDING.
- CONDENSATE, DOWN IN WALL, TAKE TUBING TO GROUND.
- MOUNT ERV ON UNISTRUT THAT IS ATTACHED TO CEILING JOISTS.
- TAKE CONDENSATE FROM F-1 AND F-1 TO FLOOR DRAIN. USE 1/4" CU PIPE.
- ALL DUCTWORK EXCEPT BATHROOM EXHAUST IS ABOVE LAY IN CEILING AND BELOW GYPSUM BOARD CEILING.
- UP TO GREENHECK 10" GRF, WITH 12" CURB AND INSECT SCREEN.
- UP TO GREENHECK 10" GRF, WITH 12" CURB AND INSECT SCREEN.
- 6" CONCRETE PAD ON 6" GRAVEL, EXP JOINT AT BUILDING, SLOPE FROM BUILDING AT 1/8" PER FOOT, CHAMFER EDGES 45 DEGREES AT 1/8", THERMOSTAT WIRE TAPED TO FLEX ELECTRICAL CONDUIT.
- CONDENSATE TO FLOOR DRAIN.
- PROVIDE DUCT MOUNTED SMOKE DETECTOR & WIRE TO SHUT DOWN BOTH FURNACES AND ENERGY RECOVERY UNIT.

**OUTDOOR AIR CALCULATIONS**

- BASED ON 3,040 INTERIOR SQUARE FEET X .06 CFM PER SQUARE FEET (180 CFM) AND 5 CFM PER 24 PEOPLE (120 CFM) A 300 CFM ENERGY RECOVERY UNIT IS SELECTED TO TAKE OUTSIDE AIR FROM THE ROOF AND DISCHARGE OUTSIDE AIR TO THE ROOF, 13' FROM INTAKE.



**HVAC FLOOR PLAN**  
SCALE: 1/4" = 1'-0"

| GRILLES, REGISTERS & DIFFUSERS SCHEDULE |                          |          |                 |                   |          |        |        |       |             |          |             |             |         |
|---|--------------------------|----------|-----------------|-------------------|----------|--------|--------|-------|-------------|----------|-------------|-------------|---------|
| MARK                                    | MANUFACTURER & MODEL NO. | MOUNTING | NECK SIZE (IN.) | MODULE SIZE (IN.) | MAX CFM  | MAX NC | MAX Pd | THROW | AIR PATTERN | MATERIAL | FINISH      | OBD         | REMARKS |
| S-1                                     | TITUS                    | TMS      | LAY-IN          | 6"                | 24x24    | 100    | <10    | 0.035 | -           | 4-WAY    | ALUMINUM    | WHT. ENAMEL | N 1, 2  |
| S-2                                     | TITUS                    | TMS      | LAY-IN          | 8"                | 24x24    | 200    | <10    | 0.036 | -           | 4-WAY    | ALUMINUM    | WHT. ENAMEL | N 1, 2  |
| S-3                                     | TITUS                    | TMS      | LAY-IN          | 10"               | 24x24    | 300    | <10    | 0.037 | -           | 4-WAY    | ALUMINUM    | WHT. ENAMEL | N 1, 2  |
| R-1                                     | TITUS                    | 50F      | LAY-IN          | -                 | 24x24    | 600    | <10    | 0.035 | -           | EGGCRATE | ALUMINUM    | WHT. ENAMEL | N 1, 2  |
| R-2                                     | TITUS                    | 50F      | LAY-IN          | -                 | REMARK 3 | 100    | <10    | 0.035 | -           | EGGCRATE | ALUMINUM    | WHT. ENAMEL | N 1, 2  |
| TG-1                                    | TITUS                    | 350      | WALL            | 10X10             | 10X10    | 150    | -      | -     | -           | ALUMINUM | WHT. ENAMEL | N 1, 2      |         |

**REMARKS:**

- FURNISH WITH WHITE FINISH.
- SEE SPECIFICATIONS FOR ADDITIONAL REQUIREMENTS.
- BUILD BOOT TO GRID SIZE, CUT EGGCRATE TO SIZE.
- THROW BASED ON 100-150-50 FPM VELOCITIES.

BASES OF DESIGN MANUFACTURER IS AS LISTED IN SCHEDULE. ADDITIONAL ACCEPTABLE MANUFACTURERS FOR GRD'S ARE KRUEGER, TITUS, PRICE, OR EQUAL.

| ENERGY RECOVERY UNIT SCHEDULE |                     |                |                |                   |                   |                  |     |     |      |         |        |
|-------------------------------|---------------------|----------------|----------------|-------------------|-------------------|------------------|-----|-----|------|---------|--------|
| MARK                          | VENMAR MODEL NUMBER | SUPPLY FAN CFM | EXHST. FAN CFM | SUMMER EFF. SENS. | WINTER EFF. SENS. | ELECTRICAL VOLTS | FLA | MCA | MOCP | REMARKS |        |
| ERV-1                         | EV 300              | 300            | 0.30           | 300               | 0.30              | 70%              | -   | 64% | 75%  | 120/10  | 5 5 15 |

EQUIVALENT MANUFACTURERS: VENMAR, RENEW AIRE, MICROMET, GREENHECK

| SPLIT SYSTEM HEAT PUMP / GAS FURNACE SCHEDULE (15 SEER 95% AFUE) |                    |                  |                  |           |           |                  |                    |     |      |      |                    |              |              |      |        |       |       |        |      |         |    |         |
|--|--------------------|------------------|------------------|-----------|-----------|------------------|--------------------|-----|------|------|--------------------|--------------|--------------|------|--------|-------|-------|--------|------|---------|----|---------|
| OUTDOOR HEAT PUMP  |                    |                  |                  |           |           |                  | INDOOR GAS FURNACE |     |      |      |                    |              |              |      |        |       |       |        |      |         |    |         |
| MARK   | TRANE MODEL NUMBER | COOLING (BTU/HR) | HEATING (BTU/HR) | MIN. SEER | MIN. HSPF | ELECTRICAL VOLTS | FLA                | MCA | MOCP | MARK | TRANE MODEL NUMBER | FANMOTOR CFM | GAS HEAT BTU | AFUE | LAT    | VOLTS | FLA   | MCA    | MOCP | REMARKS |    |         |
| HP-1   | XR15-4TWRS-042     | 42,000           | 42,000           | 15        | 9         | 240/10           | 29                 | 50  |      | F-1  | XR95-TUH1C080      | 1400         | 0.50         | 34   | 76,000 | 95    | 114°F | 120/10 | 13.5 | 16.9    | 20 | 1, 2, 3 |
| HP-2   | XR15-4TWRS-042     | 42,000           | 42,000           | 15        | 9         | 240/10           | 29                 | 50  |      | F-1  | XR95-TUH1C080      | 1400         | 0.50         | 34   | 76,000 | 95    | 114°F | 120/10 | 13.5 | 16.9    | 20 | 1, 2, 3 |

**REMARKS:**

- FURNISH WITH MATCHED INDOOR COIL.
- FURNISH WITH 7-DAY PROGRAMMABLE THERMOSTAT.
- FURNISH WITH CONCENTRIC FLUE KIT.

BASES OF DESIGN MANUFACTURER IS TRANE. ADDITIONAL ACCEPTABLE MANUFACTURERS ARE CARRIER, LENNOX, YORK, TEMPSTAR, GOODMAN.

BLOWER PERFORMANCE LISTED IN THE SUBMITTALS MUST BE BASED ON A WET COIL AND CLEAN FILTERS.  
HEAT PUMP COOLING CAPACITIES ARE BASED ON 80°F/67°F EAT AND 95°F OA.  
HEAT PUMP HEATING CAPACITIES ARE BASED ON 70°F EAT AND 47°F OA.  
PERFORMANCE DATA BASED ON AHRI STANDARD 210/240  
PERFORMANCE DATA BASED ON 60 FT REFRIGERANT LINE LENGTHS.