

# C.O.H. – ENERGY CODE COMPLIANCE NOTES:

**City of Houston Texas**



21104283

**REVIEWED FOR COMPLIANCE**

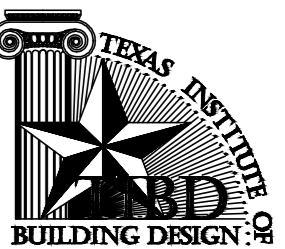
Performance of this review does not relieve the applicant from full responsibility to comply with all applicable codes, ordinances and regulations. 11/29/21



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**DESIGN & PLANNING SERVICES**

ALL DRAWINGS HAVE BEEN REVIEWED AND COMPLY TO SUITE OWNER'S SPECIFICATIONS. ALL REASONABLE ATTEMPTS AND PRECAUTIONS HAVE BEEN MADE TO AVOID OWNER CONFLICT. THE OWNER AND/OR CONTRACTOR SHALL VERIFY AND APPROVE ALL DIMENSIONS, DETAILS AND SPECIFICATIONS BEFORE CONSTRUCTION MAY COMMENCE.



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**COH – ENERGY CODE NOTES**

**Revisions:**

1	09/10/21	FOR CONSTRUCTION

**Date:** 09/10/21

**Drawn:** PM

**Approved:**

**Cadd File No:** 2021\_JOBS/MTZ

**C.O.H. JOB NO:** Project No: 21044

**Sheet Title:** ENERGY CODE NOTES

**Sheet No:** E.002

**E N V E L O P E**

- 1) PROVIDE THERMAL BARRIER PER SECTION R103.2.1, PROVIDE R-VALUES OF WALLS (R-13 MIN.), R-VALUES OF CEILINGS (R-38 MIN.) AND LOCATIONS OF AIR BARRIER SEE DWG G.001 FOR INSULATION, R VALUES.
- 2) INSULATION SHALL INCLUDE R-VALUE PRINTED ON INSTALLED INFORMATION, PAPER DEPTH MARKERS SHALL BE INSTALLED.
- 3) WINDOWS – SEE NOTE ON ELEVATION PLANS A.003 & A.004 FOR MAXIMUM U-FACTOR OF 0.40 AND SHGC OF 0.25
- 4) ATTIC DOORS – PER SECTION R402.2.4 ACCESS HATCHES AND DOORS, ATTIC DOORS TO HAVE A MINIMUM R-VALUE MATCHING SURROUNDING ATTIC INSULATION (R-38 MIN. TYP.)
- 5) SOLAR READY – SEE DWG A.001 FOR ROOF AREA LAYOUT & SOLAR READY ZONE ( AS REQUIRED )  
SEE CONDUIT FOR FUTURE WIRING TO SOLAR PANELS FROM BREAKER BOX ON SHEET E.001

**L I G H T I N G   S Y S T E M**

- 1) INTERIOR LIGHTING SHALL BE AT LEAST 75% HIGH-EFFICACY LAMPS. (COMPACT FLUORESCENT OR LED) PER SECTION R404.1,
- 2) IC-RATED RECESSED LIGHTING FIXTURES SEALED AT HOUSING/INTERIOR FINISH AND LABELED TO INDICATE ≤ 2.0 CFM LEAKAGE AT 75 PA.
- 3) FUEL GAS LIGHTING SYSTEMS HAVE NO CONTINUOUS PILOT LIGHT.

**M E C H A N I C A L**

- 1) SEE ATTIC ACCESS LOCATION ON SHEET A.002
- 2) INSTALL AUTOMATIC OR GRAVITY DAMPERS ON ALL OUTDOOR AIR INTAKES AND EXHAUSTS
- 3) FREON OR COOLANT SUPPLY LINES SHALL BE INSULATED TO A MINIMUM VALUE OF R-3 AND THE PORTION LOCATED OUTSIDE THE BUILDING SHALL HAVE PROTECTIVE COVERING AGAINST DAMAGE FROM WEATHER, SUNLIGHT, MOISTURE, ETC.
- 4) WATER HEATER SUPPLY LINES IN UNCONDITIONED SPACES BE INSULATED TO MINIMUM OF R-3.
- 5) FOR LOCATION OF WATER HEATER ( AT UTILITY RM.) SEE SHEET A.002.
- 6) PERFORM BLOWER DOOR TEST (IF REQUIRED) @ 50 PA. ≤5 ACH IN CLIMATE ZONES ,1-2, AND ≤3 ACH IN CLIMATE ZONES 3-8
- 7) SUPPLY AND RETURN DUCTS IN ATTICS INSULATED ≥= R-8 WHERE DUCT IS ≥= 3 INCHES IN DIAMETER AND ≥= R-6 WHERE < 3 INCHES. SUPPLY AND RETURN DUCTS IN OTHER PORTIONS OF THE BUILDING INSULATED ≥= R-6 FOR DIAMETER ≥= 3 INCHES AND R-4.2 FOR < 3 INCHES IN DIAMETER.
- 8) DUCT TIGHTNESS TEST (IF REQUIRED) RESULT OF ≤4 CFM/100 FT2 ACROSS THE SYSTEM OR ≤3 CFM/100 FT2 WITHOUT AIR HANDLER @ 25 PA. FOR ROUGH-IN TESTS, VERIFICATION MAY NEED TO OCCUR DURING FRAMING INSPECTION.
- 9) AIR HANDLER LEAKAGE DESIGNATED BY MANUFACTURER AT ≤=2% OF DESIGN AIR FLOW.
- 10) PROGRAMMABLE THERMOSTATS TO BE INSTALLED FOR CONTROL OF PRIMARY HEATING AND COOLING SYSTEMS AND INITIALLY SET BY MANUFACTURER TO CODE SPECIFICATIONS.
- 11) HEAT PUMP THERMOSTATS TO BE INSTALLED ON HEAT PUMPS
- 12) CIRCULATING SERVICE HOT WATER SYSTEMS HAVE AUTOMATIC OR ACCESSIBLE MANUAL CONTROLS.
- 13) ALL MECHANICAL VENTILATION SYSTEM FANS NOT PART OF TESTED AND LISTED HVAC EQUIPMENT MEET EFFICACY AND AIR FLOW LIMITS.
- 14) HOT WATER BOILERS SUPPLYING HEAT THROUGH ONE- OR TWO-PIPE HEATING SYSTEMS HAVE OUTDOOR SETBACK CONTROL TO LOWER BOILER WATER TEMPERATURE BASED ON OUTDOOR TEMPERATURE.
- 15) HEATED WATER CIRCULATION SYSTEMS TO HAVE A CIRCULATION PUMP. THE SYSTEM RETURN PIPE IS A DEDICATED RETURN PIPE OR A COLD WATER SUPPLY PIPE. GRAVITY AND THERMOS-SYPHON CIRCULATION SYSTEMS ARE NOT PRESENT. CONTROLS FOR CIRCULATING HOT WATER SYSTEM PUMPS START THE PUMP WITH SIGNAL FOR HOT WATER DEMAND WITHIN THE OCCUPANCY. CONTROLS AUTOMATICALLY TURN OFF THE PUMP WHEN WATER IS IN CIRCULATION LOOP IS AT SET-POINT TEMPERATURE AND NO DEMAND FOR HOT WATER EXISTS.
- 16) ELECTRIC HEAT TRACE SYSTEMS COMPLY WITH IEEE 515.1 OR UL 515. CONTROLS AUTOMATICALLY ADJUST THE ENERGY INPUT TO THE HEAT TRACING TO MAINTAIN THE DESIRED WATER TEMPERATURE IN THE PIPING.
- 17) WATER DISTRIBUTION SYSTEMS THAT HAVE RECIRCULATION PUMPS THAT PUMP WATER FROM A HEATED WATER SUPPLY PIPE BACK TO THE HEATED WATER SOURCE THROUGH A COLD WATER SUPPLY PIPE HAVE A DEMAND RECIRCULATION WATER SYSTEM. PUMPS HAVE CONTROLS THAT MANAGE OPERATION OF THE PUMP AND LIMIT THE TEMPERATURE OF THE WATER ENTERING THE COLD WATER PIPING TO 104°F
- 18) DRAIN WATER HEAT RECOVERY UNITS TESTED IN ACCORDANCE WITH CSA B55.1. POTABLE WATER-SIDE PRESSURE LOSS OF DRAIN WATER HEAT RECOVERY UNITS < 3 PSI FOR INDIVIDUAL UNITS CONNECTED TO ONE OR TWO SHOWERS. POTABLE WATER-SIDE PRESSURE LOSS OF DRAIN WATER HEAT RECOVERY UNITS < 2 PSI FOR INDIVIDUAL UNITS CONNECTED TO THREE OR MORE SHOWERS.