

# INSULATION AND VENTILATION

## ATTIC

- Type: 4 inches of Loose fiber glass
- Condition: The insulations are not evenly distributed and not adequate, and also the attic hatch door did not have air tight gaskets and any insulation.
- *Recommendation:* Improve the level of insulation to at least 12 inches and distribute them evenly even over the hatch door, and also install air tight gasket for the door.



## WALLS

- Type: Bat type fiberglass from the visible and checked sections such as: near the water meter, east outside wall, and second floor north wall.
- *Recommendation:* Check their condition due to moisture and water ingress by a building envelope specialist.

## FLOORS

- Type: Concealed

## UNFINISHED SPACES

- Type: There was not any insulation visible.

## PIPES AND DUCTS

- Types:
  - 1- A kind of PVC insulation for small portion of the hot water line above the gas water heater, and the rest were concealed.
  - 2- Asbestos tape used to seal two connected heating ducts.
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- *Recommendation:* Presence of the asbestos is a health hazard, and their disposal must be done by hazmat specialist personnel.



## VENTILATION

- Condition: There were not any soffit vent in the attic, and it had just ridge vent.
- *Recommendation:*
  - 1- Add soffit ventilation for the attic otherwise there will be condensation and other moisture related problems.

2- Change the rectangular channel of the dryer's vent with smooth-metal circular section.



## VAPOR BARRIERS

- Conditions: There was no vapor barrier in the attic.
- *Recommendation:* Install vapor barrier under the insulation in the attic to prevent condensation.



## EXHAUST FANS

- Conditions: There was an exhaust fan in the ground floor (ventilation fan), and discharging inside air to the north-west wall by a brass Ventilation blind.



- *Recommendations:*
  - 1- Install make up air to prevent negative pressure (while the exhaust fan is operating), and not bringing exhaust gases into the house which is a health issue.
  - 2- Change the Venetian blind with an aluminum type to prevent any potential of rust, and keep its perimeter caulked and sealed.