

TEXAS TECH UNIVERSITY™

Wind Engineering Research Center

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Mr. John Divine
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Dr. Mr. Divine

We have studied the design of the reinforced concrete storm shelter, the latest drawings dated February 7, 2001. These drawings show the thickness of the wall where it joins the roof as being 4 3/4" thick and shows the roof of the shelter to be 4" thick. A subsequent sketch shows two steel reinforcing bars criss-crossing the vent opening to prevent intrusion of windborne debris which might destroy the PVC vent pipe through the roof. The drawings show a detail of a door made with seven gauge steel plate with a latching mechanism having three points of contact. A continuous piano hinge connects the other side of the door.

It is our conclusion, based on experience and judgment, that shelters built to the specifications shown on the drawings meet the criteria established by the Federal Emergency Management Agency and require no testing for debris impact resistance. Your engineering calculations should verify that the shelter has the structural integrity to withstand wind loads imposed by 250 mph ground-level winds and that the shelter is engineered against floating out of the ground under saturated soil conditions. We do not perform such calculations or checks.

Please notify us if we can be of further service.

Sincerely Yours,



Ernst W. Kiesling, P.E., Ph.D.