

The total weight of the concrete building is estimated :

$$34,728\# + 19,597.5\# + 75,510.75\# = 129,836.25\#$$

buoyancy :

Volume of the building below static water level (BFE) :

Natural Grade = 8.4 ft

BFE = 14.0 ft

Depth of building below BFE = $14 - 8.4 = 5.6$ ft

Area of building = $16.25 \times 16 = 260$ ft²

Volume of displaced water = $260 \text{ ft}^2 \times 5.6 \text{ ft} = 1,456 \text{ ft}^3$

Displacement Force: $1456 \text{ cuft} \times 62.2 \text{ \#/cuft} = 90,854 \text{ \#}$

Since the weight of the concrete bldg is greater than the buoyancy force the bldg will not float.

$$129,836.25\# > 90,854\#$$

Thank You,



David Dammon