

## SANDBAGS

Sandbags, when properly filled and placed, will redirect storm and debris flows away from property improvements.

### FILLING

1. Fill sandbags one-half full. Sand is suggested if readily available; however, sand is not mandatory, any local soil may be used.
2. For a more durable bag with increased effective life, mix 10 parts of sand or soil with 1 part of cement. The materials can be mixed and placed dry. After all bags are in place, a light sprinkling of water is recommended. This technique is only effective with burlap sandbags and will not work with plastic sandbags.

### PLACING

Fold top of sandbag down and rest bag on its folded top (Fig 4).

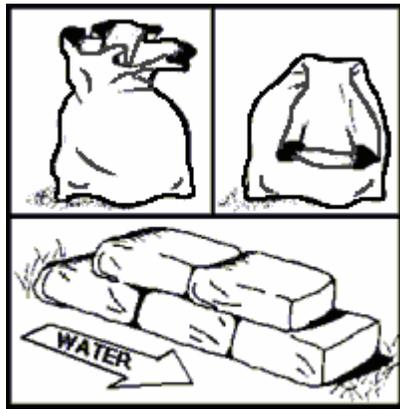


Fig.4 SANDBAG PLACEMENT

It is important to place bags with the folded top toward the upstream or uphill direction to prevent bags from opening when water runs by them.

Care should be taken to stack sandbags in accordance with the illustrations. Place each sandbag as shown, completing each layer prior to starting the next layer. Limit placement to two layers unless a building is used as a backing or sandbags are pyramided (Figs. 5-11).



Fig.5 SANDBAG STACKING AGAINST BUILDINGS

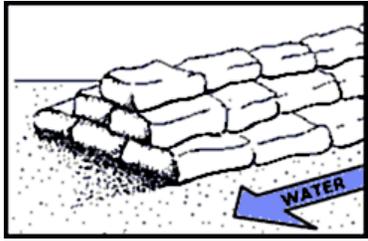


Fig.6 PYRAMID SANDBAG STACKING

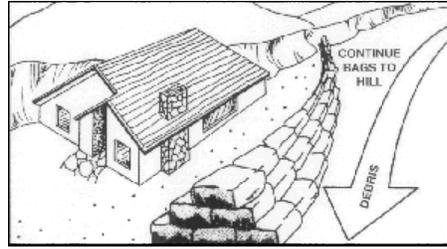


Fig.7 DIRECTING DEBRIS AWAY FROM BUILDINGS

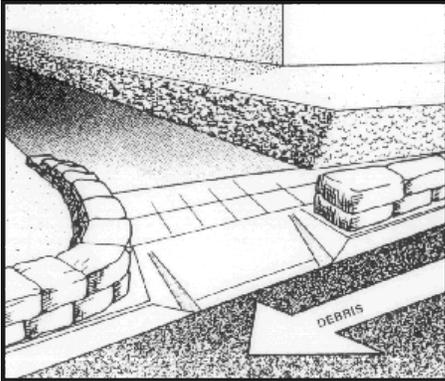


Fig. 8 CONTROLLING DEBRIS OR STORM FLOWS IN STREETS

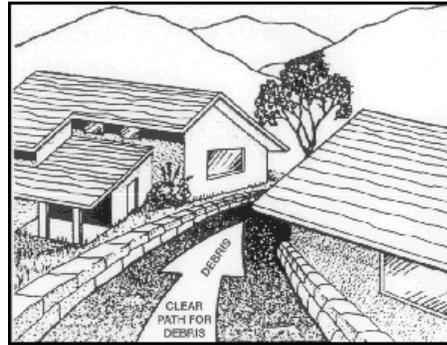


Fig. 9 DIRECTING FLOWS BETWEEN BUILDINGS

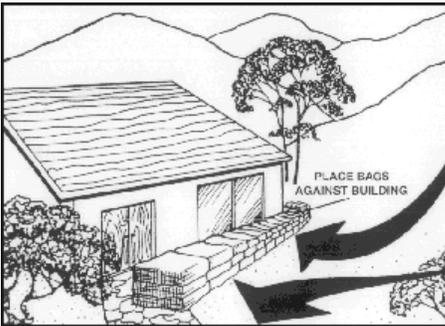


Fig.10 BUILDING PROTECTION

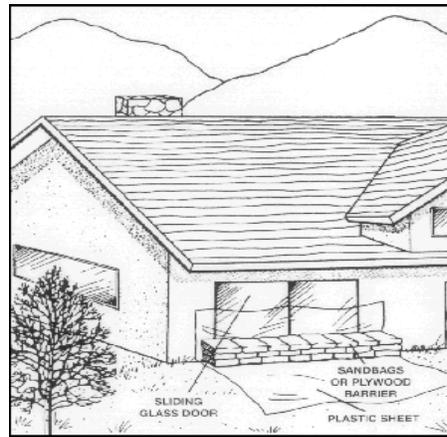


Fig.11 SLIDING GLASS DOOR SEALING

## LIMITATIONS

1. Sandbags will not seal out water.
2. Sand and soil filled burlap sandbags deteriorate when exposed for several months to continued wetting and drying. If bags are placed too early, they may not be effective when needed.
3. Sandbags are basically for low-flow protection (up to 2 feet). Protection from higher flows requires a more permanent type of structure.

## CAUTION

Do not use straw or bales of hay in lieu of sandbags. They do not perform as well as sandbags and may be washed away.