

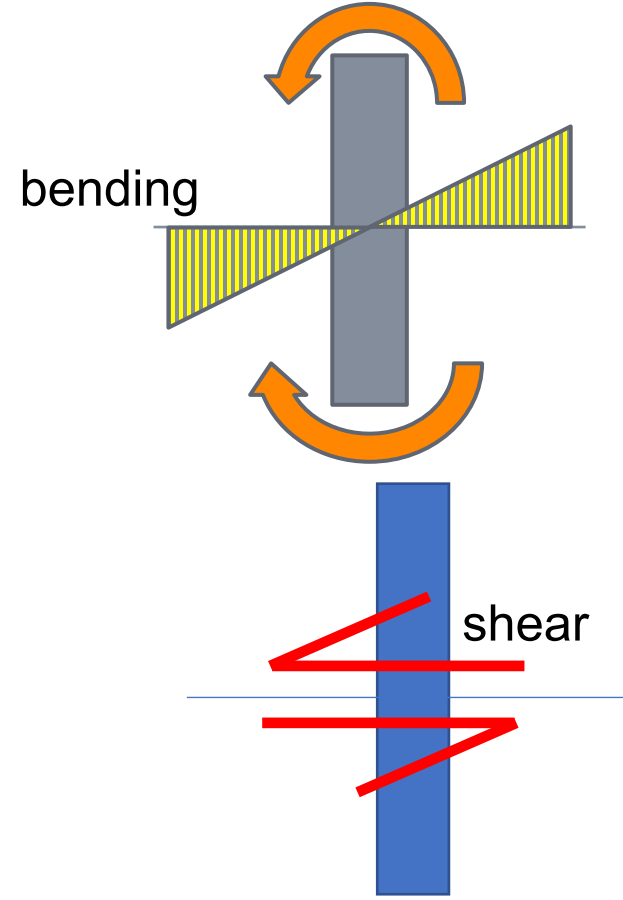
# Design principles

1) Soil above failure plane possibly fails in passive pressure. OK! Structural element will carry the load

2) Structural element: bending vs shear

3) Arching: pile spacing max.  $3xD$

4) Passive pressure below failure plane → embedment



# Case study: Rockslide





<https://youtu.be/j2RT0U1s7mE>



**Not us!!!**

**WTAJ** HD  
5:59 43°

**BATH  
FITTER®**

**TWO OTHERS AFTER WARRANTS SERVED THIS MORNING**

**WTAJ** AT LEAST 6



## CRACK CAUSING CONCERN

CREWS MAKE AREA SAFER

WTAJ HD

5:02 57°

**HSA** HAROLD SHEPLEY AND ASSOCIATES, INC.

WTAJ

PICK 5 EVENING : 6-6-3-6-7

WTAJ

CASH 5 : 09-23-25-29-32



WTAJ MD

#WTAJ

HSA HAROLD SHEPLEY AND ASSOCIATES, INC.

2 EVENING : 8-0

WTAJ

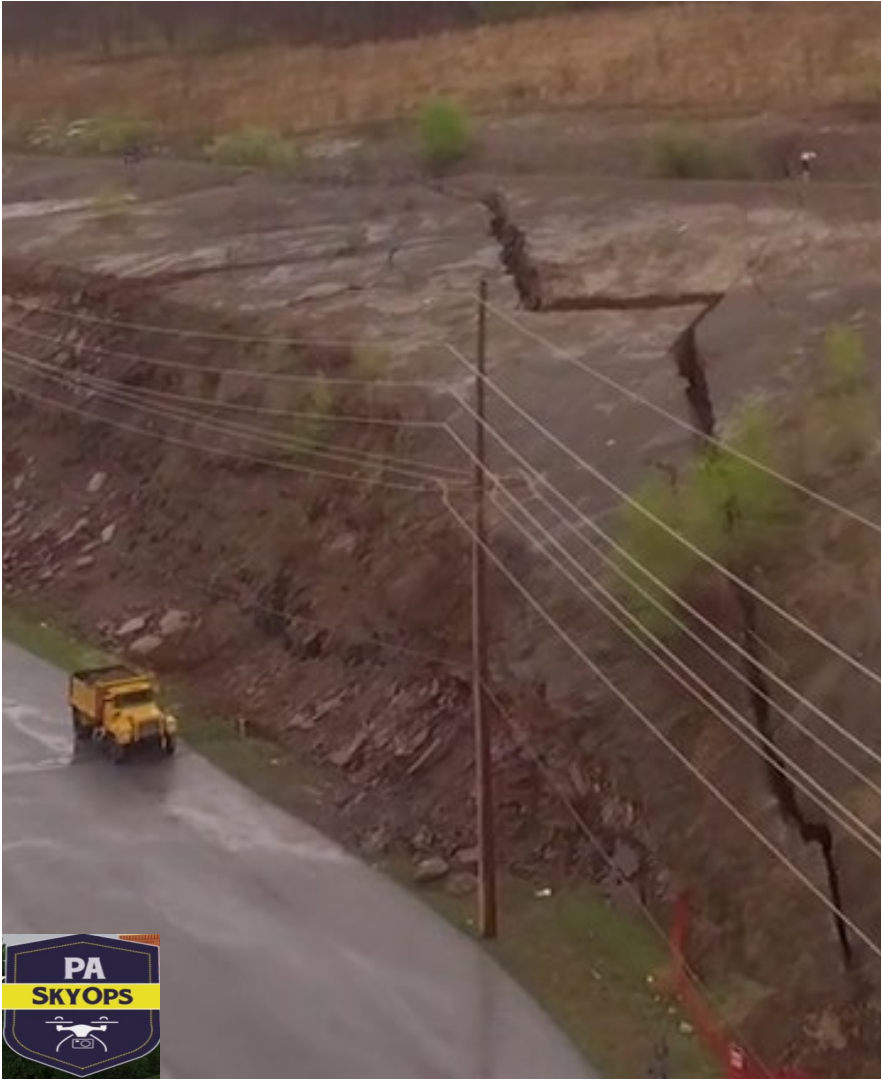
PICK 3 EVENING : 6-1-5

WTAJ

PICK 4 EVENING

- **Sandstone interbedded with shale. Dip angle 16 degrees.**
- **Wetlands above the area. Ditch on top.**
- **Trees on the ditch.**
- **Water running through cracks/joints**





- Slide plane: weathered shale
- Block: 150 ft (46m) upslope x 400 ft (122m) wide x 20 ft (6m) thick.







Failure plane