

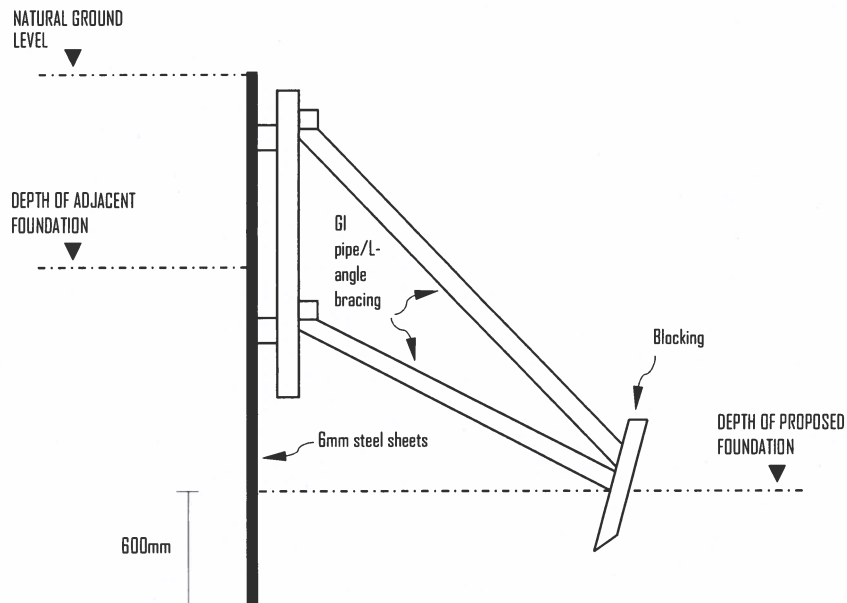
PROPOSED METHODOLOGY FOR PROTECTION OF ADJOINING FOUNDATIONS DURING EXCAVATION

Project	Construction of 02/03 storey buildings at TVET CENTER, R. ALIFUSHI
Proposed foundation depth	1200 mm from the natural ground level
Date	10 TH NOV 2021

A 600mm wide, 1200mm long pit can be excavated at a time along the adjoining buildings. The foundation can be supported by construction of 150mm thick solid block retaining wall, which starts at 300mm below the proposed foundation depth up to the underside of adjoining foundation. To provide lateral stiffness, 16mm \varnothing reinforced bars at 600mm centers should be planted inside the wall vertically and plastered on side. The retaining wall shall be braced using 50mm \varnothing x 3.0mm thick G.I pipes or 50x50x3.0mm thick steel L-angle sections in all feasible directions. This foundation protection process will be continued until all the adjoining buildings foundations are supported.

The above stated methodology can only be applied if the adjoining building owner permits or else the lateral pressure on the material adjacent to the excavation could be prevented materially by means of proper and careful placement of sheeting and bracing, i.e., around the property line. 6mm thick steel sheets may be driven down to a depth of 600mm below the proposed foundation depth. To provide lateral stiffness these sheets shall be braced using 50mm \varnothing x 3.0mm thick G.I pipes or 50x50x3.0mm thick steel L-angle sections in all feasible directions. Onsite close observation, frequent measurements and recording of the vertical and lateral movements and behavior of the sheeting and bracing should be done to provide early warning of unfavorable development which might cause settlement of the adjacent property. De-watering will be continued throughout the excavation process and until casting of foundation, if the proposed foundation depth is below the water table.

Schematic diagram, showing the above proposed protection method is shown below.



Muaviyath Abdul Sattar

Muaviyath Abdul Sattar

Civil Engineer

