Construction of Sand Dam in Sriba locality - West Darfur State

Project Name: WFP-FFA-2022

General: CRS willing to construct a Sand Dam in Sriba locality under WFP-FFA-project, In participotry with the local community the role of loacl community will be provission of loacl materials and labour**.**

Technical Specifications:

1. **Excavation**: Foundation excavation should be for 4 m width and to bedrock ground, and remove the excavated soil away from the work site and bedrocks should be cleaned from all materials and soils dust…ext. ensures that to consider supports the side soil from sliding.
2. **Reinforcement**: The wall should be reinforced with steel bars Y20 @ 1.2 m fixed vertically to the rocks for at least 20 cm holes drilled to the bedrock use 1:2 cement-sand mix. The bars should be sited in opposite manner and as shown in drawing, the cover should be 15 cm from the side and 5 cm from the top. barbed wire should be use to increase the tensile strength, Barbed wire is fixed across the dam in a helix shape every 50cm of height of the dam. And must be tightly warped around the steel bars and rocks and secured each end of the dam.
3. **Rocks :** For below ground level large rocks should be used,so can easily can be move to it positions. Use rocks of different sizes so smaller stones filling the gaps between the larger rocks**.**
4. **Mortar:** The mortar should be 4:1 sand cement ratio or 3.5 cement bags per cubic meter, The cement used should be Garde 42.5 portland cement the production date should not be more than 2 months when the work statrts.
5. **Shuttering**: shuttering used must be strong enough to hold the material placed durring the work and must supported to resist side pressure of the wall.
6. **General Specifications**: all cracks should be filled well with mortar to protect water behind dam to sewage use 1:2 cement -sand mortar, the mortar should be first in layers 20 cm then filled by rocks. Mortar should be sufficiently wet as to be pliable and easily mixed by hand, with an allowance made for absorption of water by the rocks and formwork, typically 25 litter /cement bag. The walls should be curried for 4 weeks 3 times a day(morning, noon and evening the layer of the dam must be watered and the upstream and downstream sides splashed with water.

Recommeneded: Visit the work site before fill the Qutation

Note: work include provision of matrerils,shuttering equipements, labuor and transportations.

No	Description	Unit	Quantity	Unit Rate	Total	Note
1	**Foundation Excavate**: Excavate for the foundation trench till reach the river rock bed.(25 x 4 x D). Where D: the depth to rocky bed.	ML	28			
2	Provide & cast: 3.5 cememt Bags per 1cubic meter (1:4) cement sand ratio and granit stones for dam wall, the wall should include steel bars Y20 @1.2m installed to the bedrock for at least 20cm holes with cement mortar 1:2 the bars should be placed opposite each other along the dam and use barbed wire to tie the two forms togther at the base and each 25 cm.	M3	67			
3	**total**					