



REQUEST FOR QUOTATION

Project Name: PAL 10-00127421- Rubble Removal Project - Emergency Grant
Aid for Palestinians

Package 10: Paving of Agricultural roads using recycled crushed concrete
in in different locations of Gaza Strip

Bill of Quantity (BOQ)



PREAMBLE TO BILL OF QUANTITY (BOQ)

CONTRACTOR'S OBLIGATIONS

- The Contractor has to submit Detailed Shop Drawings to be approved by the Engineer before the commencement of the work, and all required materials should be supplied as specified and subject to the Engineer's approval.
 - The Contractor has to fix the underground services that may be damaged during his work.
 - All works have to be done according to the Engineer's instructions, drawings, and specifications.
 - The Contractor has to repair any damages of any services at full satisfaction of relevant Service Authority
 - The contractor has to test on his own expenses, the sub-grade CBR before the commencement of work, In case the CBR value is less than 15%, then soil replacement should be applied.
 - The contractor should take into consideration CBR test should be taken where the soil type change to determine the areas that should be replaced.
 - The contractor has to check the upper 30 cm below the top of the sub-grade to verify that they are uniform, and any rubbish material or saturated /wet soil shall be removed and replaced with suitable material approved by the Engineer,
 - contractor has to Execute any required side slope according to specifications, drawings, and Engineer's instructions
 - Price will include costs of removing and/or relocating all obstacles such as debris, garbage, trees, and existing services in addition to the required materials necessary for work completed according to the engineer's instructions and specifications.
 - The contractor has to coordinate with Municipalities regarding the location for garbage containers.
 - The contractor should include in his price the costs of cut and removal of trees' roots, backfilling, watering, and compaction in layers with clean sand as specified, and according to the Engineer instructions, the price will also include relocation of Power, Telephone poles and networks to the sidewalk.
 - Price will include costs of adjusting the levels of existing manholes (in any diameter) to suit the new situation. Replacing covers, frames, rings if defected and all materials and work required to complete the task.
 - The contractor has to remove the existing base course during preparation works and transport it wherever directed by the engineer to the related Municipality.
 - The price will include costs of cutting and removing the existing asphalt pavement layer and transporting the removed material to a site approved by the Engineer
 - Prices for excavation items shall include the removal of any buried structure not to be part of the proposed roads, including transport of excavated, surplus material and buried structure (not to be part of the proposed roads) to a location approved by the engineer or his
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representative outside the site, workmanship and anywhere else, needed, all according to drawings, specifications, conditions and directed instructions by the Engineer or his representative.

- Quantities of excavation shall be measured according to the dimensions mentioned in the drawings (engineering measurements in m²)
- Back-filling items should be in layers (25cm max. each & compaction test not less than 95%). Prices shall include material supply, watering, compacting, transporting, testing and anywhere else, needed, all according to drawings, specifications, conditions and direct instructions by the Engineer or his representative.
- Suitable clean sand should be used for back-filling in layers (25cm max. each & compaction test not less than 97%), selected from the approval excavated soil or imported. Prices shall include supply, watering, compacting, transporting, testing, and anywhere else, needed, all according to drawings, specifications, conditions, and directed instructions by the Engineer or his representative.
- The contractor shall check and ascertain that the Benchmark used by him and its elevation is accurate and correct in all respects. The contractor shall check the surveying work. If correction is needed, the contractor has to redo the surveying work on his own.
- Adjust levels of existing lines (sewer, water, telephone, stormwater, etc.) to the required level.

Locations and names of roads

Roads under this BoQ are existing in Gaza Strip, as follows:

- **Rafah Governorate-ALMa'abar Street.**
- **Middle Governorate - Street No 72 Street – AlBureij**
- **North Governorate – Abu Safia Street-Jabalia & Abu Thoraya Street – Om Al Nasser.**

Bill No (1) : Rafah Governorate-ALMa'abar Street

Item No.	Description	Unit	Qty.	Unit Price (US\$)	Total (US\$)
1.1	<p>Leveling, Clean, excavate and fill the targeted lanes from natural ground level to the bottom of the sub-base layer design level or to the bottom of improvement layer (Kukar Layer- if any) including watering, compaction with not less than 95% using heavy compactor 25 tons, & CBR not less than 15%. The works include removal of all excavated material, asphalt, or any other obstacles from the site to the location that would be indicated by the engineers. The price includes adjusting levels of existing manholes or H.C manholes and exchanging when required, also lowering the pipes and connecting it to the main manhole where needed. The price includes also filling with compacted kurkar for all existing unused percolation pits and retaining walls steel boxes. All in accordance with the drawings, specifications and Engineer's instructions.</p>	m ²	18500		
1.2	<p>Supply, fill & compact Kurkar material with (CBR> 30) under the crushed material layer (soil improvement) layer 30 cm thick (MDD 97%). The work must be carried out according to the specifications, design drawings & the engineer's instructions The price shall include spreading, leveling, testing, watering and compaction.</p>	m ²	12000		
1.3	<p>Transport and lay approved crushed concrete sub-base at least 25 cm thick in two layers for the targeted lanes to the levels shown in the drawings. Price includes transporting crushed material, watering and compaction using heavy compactor 25 ton, to reach 98 % of maximum dry density. The price includes Adjusting levels of existing manholes (sewer, water, telephone, storm water etc.) to the required level. the work includes decreasing the height of manholes by cut and remove the extra parts or increasing the height by supplying & installing precast concrete rings (B300), in case the height is more than 30cm. Otherwise casting of concrete may be used, also includes (if needed) cast iron cover 25 ton (with the word sewer in English & Arabic) and all required material. The work includes also cleaning of the existing manholes and lines. The work also includes all tests as per specifications and Engineer's instructions. Grader must be used in spreading and leveling of the last layer. Note: Crushed concrete materials to be transported from UNDP crushing sites in Johr Al Dik to the nominated site locations.</p>	M2	17000		



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Item No.	Description	Unit	Qty.	Unit Price (US\$)	Total (US\$)
1.4	Supply, spread, and compact at least 5 cm thick granular sand "Kurkar" with CBR > 30%. The price shall include spreading, leveling, testing, watering and compaction.	m ²	17000		
1.5	Supply and install UPVC pipes 160mm, SN8 for future Connections, with sockets , work includes excavation of trenches (depth 0.75-1.2m), bedding, compacted backfilling with clean sand, warning tape and all required to complete the work according to the specifications and drawings and engineer's instructions.	M.R	25		
1.6	Supply and cast B250 reinforced concrete for miscellaneous concrete elements (staircases, edge beams, door thresholds, ramps, etc.) and any other element could be needed according to work. The price includes shuttering, casting, testing and any direct or indirect requirements to complete the work according to specifications and engineer instruction.	M3	5		
Total of Bill No. (1) : Rafah Governorate-AIMa'abar Street					

Bill No (2): Middle Governorate Roads - Street No 72 Street – AlBureij

Item No.	Description	Unit	Qty.	Unit Price (US\$)	Total (US\$)
2.1	Leveling, Clean, excavate and fill the targeted lanes from natural ground level to the bottom of the sub-base layer design level or to the bottom of improvement layer(Kukar Layer – if any) including watering, compaction with not less than 95% using heavy compactor 25 tons, & CBR not less than 15%. The works include removal of all excavated material, asphalt, or any other obstacles from the site to the location that would be indicated by the engineers. The price includes adjusting levels of existing manholes or H.C manholes and exchanging when required, also lowering the pipes and connecting it to the main manhole where needed. The price includes also filling with compacted kurkar for all existing unused percolation pits and retaining walls steel boxes. All in accordance with the drawings, specifications and Engineer’s instructions.	m ²	13500		
2.2	Supply, fill & compact Kurkar material with (CBR> 30) under the crushed material layer (soil improvement) layer 20 cm thick (MDD 97%). The work must be carried out according to the specifications, design drawings & the engineer's instructions The price shall include spreading, leveling, testing, watering and compaction.	m ²	8000		
2.3	Transport and lay approved crushed concrete sub-base at least 20 cm thick in one layer for the targeted lanes to the levels shown in the drawings. Price includes transporting crushed material, watering and compaction using heavy compactor 25 ton, to reach 98 % of maximum dry density. The price includes Adjusting levels of existing manholes (sewer, water, telephone, storm water etc.) to the required level. the work includes decreasing the height of manholes by cut and remove the extra parts or increasing the height by supplying & installing precast concrete rings (B300), in case the height is more than 30cm. Otherwise casting of concrete may be used, also includes (if needed) cast iron cover 25 ton (with the word sewer in English & Arabic) and all required material. The work includes also cleaning of the existing manholes and lines. The work also includes all tests as per specifications and Engineer’s instructions. Grader must be used in spreading and leveling of the layer. Note: Crushed concrete materials to be transported from UNDP crushing sites at Johr Al Dik to the nominated site locations.	m ²	12500		

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Item No.	Description	Unit	Qty.	Unit Price (US\$)	Total (US\$)
2.4	Supply, spread, and compact at least 5 cm thick granular sand "Kurkar" with CBR > 30%. The price shall include spreading, leveling, testing, watering and compaction.	m ²	12500		
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2.6	Supply and cast B250 reinforced concrete for miscellaneous concrete elements (staircases, edge beams, door thresholds, ramps, etc.) and any other element could be needed according to work. The price includes shuttering, casting, testing and any direct or indirect requirements to complete the work according to specifications and engineer instruction.	M3	10		
Total of Bill No (2): Middle Governorate Roads - Street No 72 Street – AlBureij					

Bill No (3): North Governorate - Abu Safia Street-Jabalia & Abu Thoraya Street – Om Al Nasser.

Item No.	Description	Unit	Qty.	Unit Price (US\$)	Total (US\$)
3.1	Leveling, Clean, excavate and fill the targeted lanes from natural ground level to the bottom of the sub-base layer design level or to the bottom of improvement layer(Kukar Layer – if any) including watering, compaction with not less than 95% using heavy compactor 25 tons, & CBR not less than 15%. The works include removal of all excavated material, asphalt, or any other obstacles from the site to the location that would be indicated by the engineers. The price includes adjusting levels of existing manholes or H.C manholes and exchanging when required, also lowering the pipes and connecting it to the main manhole where needed. The price includes also filling with compacted kurkar for all existing unused percolation pits and retaining walls steel boxes. All in accordance with the drawings, specifications and Engineer’s instructions.	m ²	11500		
3.2	Supply, fill & compact Kurkar material with (CBR> 30) under the crushed material layer (soil improvement) layer 20 cm thick (MDD 97%). The work must be carried out according to the specifications, design drawings & the engineer's instructions The price shall include spreading, leveling, testing, watering and compaction.	m ²	7000		
3.3	Transport and lay approved crushed concrete sub-base at least 20 cm thick in one layer for the targeted lanes to the levels shown in the drawings. Price includes transporting crushed material, watering and compaction using heavy compactor 25 ton, to reach 98 % of maximum dry density. The price includes Adjusting levels of existing manholes (sewer, water, telephone, storm water etc.) to the required level. the work includes decreasing the height of manholes by cut and remove the extra parts or increasing the height by supplying & installing precast concrete rings (B300), in case the height is more than 30cm. Otherwise casting of concrete may be used, also includes (if needed) cast iron cover 25 ton (with the word sewer in English & Arabic) and all required material. The work includes also cleaning of the existing manholes and lines. The work also includes all tests as per specifications and Engineer’s instructions. Grader must be used in spreading and leveling of the layer. Note: Crushed concrete materials to be transported from UNDP crushing sites at Johr Al Dik to the nominated site locations.	m ²	10500		

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3.5	Supply and install UPVC pipes 160mm, SN8 for future Connections, with sockets , work includes excavation of trenches (depth 0.75-1.2m), bedding, compacted backfilling with clean sand, warning tape and all required to complete the work according to the specifications and drawings and engineer's instructions.	M.R	25		
3.6	Supply and cast B250 reinforced concrete for miscellaneous concrete elements (staircases, edge beams, door thresholds, ramps, etc.) and any other element could be needed according to work. The price includes shuttering, casting, testing and any direct or indirect requirements to complete the work according to specifications and engineer instruction.	M3	5		
Total of Bill No (3): North Governorate - Abu Safia Street-Jabalia & Abu Thoraya Street – Om Al Nasser					



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Paving of Agricultural roads using recycled crushed concrete in different
 locations in the Gaza Strip
 Rafah Governorate _ Middle Governorate
 North Governorate

Summary

Description	Total (US\$)
Total of Bill No. (1) : Rafah Governorate-AIMa'abar Street	
Total of Bill No (2): Middle Governorate Roads - Street No 72 Street – AlBureij	
Total Bill No (3): North Governorate - Abu Safia Street- Jabalia & Abu Thoraya Street – Om Al Nasser	
Vat (0%)	
Grand Total (US\$)	

Grand Total (in letters): -----

Contractor's Name: -----

Signature and Stamp: -----

Date: -----