

**PROPOSED ESTIMATE OF WAREHOUSE FOR
SURYASON FARMERS PRODUCER COMPANY LTD ,
KANDHALI , TAL-SAMUDRAPUR , DIST- WARDHA**

STRUCTURAL & CIVIL WORKS

| It. No. | PWD SSR Serial No. | PWD SSR ITEM NO. | DESCRIPTION | Unit | QUANT ITY | UNIT RATE (Rs.) | TOTAL AMOUNT (Rs.) |
|---------|-----------------------------|---------------------------|---|------|--------------|-----------------------|-----------------------|
| | | | The abbreviations used in the Specification and Bill of Quantities shall be read as follows : | | | | |
| | | | IS :- Indian Standard | | | | |
| | | | A.S.T.M :- American Society for Testing and Materials | | | | |
| | | | EIC-Engineer in Charge | | | | |
| | | | MM or mm :- Millimetre /s | | | | |
| | | | CM and cm :- Centimetre /s | | | | |
| | | | RM (rm) / RMT (rmt) :- Running metre /s | | | | |
| | | | KG (kg) :- Kilogram /s | | | | |
| | | | Tonne/t/MT :- Metric ton/s (1000 Kilogram's) | | | | |
| | | | Dia. :- Diameter | | | | |
| | | | Sqm :- Square metre | | | | |
| | | | Cum:- Cubic metre | | | | |
| | | | No.:- Number/s | | | | |
| | | | Qty.:- Quantity | | | | |
| | | | L.S :- Lump sum. | | | | |
| | | | QRO:- Quote rate only. | | | | |
| | | | Drg. No. :- Drawing number | | | | |
| | | | PCC:- Plain Cement Concrete | | | | |
| | | | RCC:- Reinforced cement concrete | | | | |
| | | | HSD:- High Yield strength Deformed bars. | | | | |
| | | | MS:- Mild Steel | | | | |
| | | | CRS:- Corrosion resistance steel. | | | | |
| | | | CTD:- Cold Twisted Deformed steel. | | | | |
| | | | TMT :- Thermo Mechanically Treated Bars | | | | |
| | | | IRC :- Indian Road Congress | | | | |

A - BILL OF QUANTITY FOR STRUCTURAL & CIVIL WORKS

| It. No. | PWD SSR Serial No. | PWD SSR ITEM NO. | DESCRIPTION | Unit | QUANTITY | UNIT RATE (Rs.) | TOTAL AMOUNT (Rs.) |
|----------|--------------------|------------------|--|------|------------|-----------------|--------------------|
| 1.00 | | | EARTH WORK | | | | |
| 1.10 | | | EARTH WORK AND EXCAVATION | | | | |
| | | | Notes:- | | | | |
| 1.1.1 | | | Local Excavation: Excavation for individual footings/trenches etc. in the following strata measured from mass excavation level up to the required depth. Rate includes pumping/dewatering /sludge removal, back filling/disposing off the surplus earth to the local dumping yard at any time as directed by the Engineer-in-charge. The rate also includes supporting under ground utilities such cables, drains, service pipes water mains, if encountered. The soil proposed to be used for backfilling the excavated site should be free from any debris, boulders, pieces of broken foundation etc., approval by EIC. The measurement for earthwork shall be for the dimension of PCC / member forming the external face of the building at the lowest level multiplied by the depth of the excavation i.e. the difference between the initial level and final level as shown in the drawing or as directed. | | | | |
| | 726 | 21.02 | 0 M to 1.5 M | Cum | 30 | 207 | 6,260 |
| | 728 | 21.04 | 1.5 M to 3.0 M | Cum | 30 | 258 | 7,802 |
| | | | Black Cotton Soil,Soft soil, sand and Murrum | | | | - |
| 1.1.3 | | | Filling in plinth, raise formation and the area wherever required all depths elevation with selected excavated earth in layers not exceeding 150 mm thickness, including mixing, spreading, leveling, watering, ramming and consolidating each layer with power / hand roller of required capacity to obtain 97% modified proctor density as per relevant specification and dressing, leveling to the required profiles, etc. all complete as directed by the Engineer but excluding excavation. | | | | |
| a) | 755 | 21.36 | With earth available within the site premises | Cum | 0 | 120 | - |
| b) | 756 | 21.37 | With earth brought from out side | Cum | 171 | 795 | 1,35,774 |
| 1.1.4 | 755 | 21.36 | Removal and disposal of surplus excavated materials as directed by EIC to dumping yard (outside the Owner's premises) arranged by the contractor using mechanical transport, spreading in layers, breaking clods and leveling, keeping the site & approach roads neat & clean to the satisfaction of Engineer. The rate shall also include for arranging dumping ground as approved by the municipal / local authorities outside the Owner's premises for all leads and lifts, paying all statutory fees, obtaining disposal certificate and observing all statutory rules & regulation thereof as required by the concerned authorities. | Cum | 15 | 120 | 1,814 |
| 1.1.5(i) | | | Rubble Soling: Providing and laying rubble packing 230mm thick using hard stone rubble, handset one on edge, consolidating the same with power roller 8 to 10 tonnes wherever possible, or ramming with heavy wooden rammers, watering, filling, interstices with hand broken stone spalls and binding the top with stone dust at least 0.5 Cum. per 10 Sqm. preliminary rolling / ramming of sub-grade watering, rolling and ramming etc. complete as directed by EIC | | | | |
| | | | Rubble selected and available from site premises as directed & approved by Engineer and obtained after breaking of stones/rubbles to the required size. | | | | |
| a) | | | With rubble available at site | Cum | 0 | 550 | - |
| b) | 759 | 21.40 | With rubble brought from outside | Cum | 9 | 1,454 | 13,191 |

| | | | | | | | |
|--|-------------|--------------|--|------|-----|---------------|-----------------|
| 1.1.6 | | | Pest Control: Unless otherwise specified, the rates quoted for Anti-Termite treatment shall include the following : | | | | |
| | | | Material Safety Data Sheet to be submitted and approved prior to use at site. | | | | |
| a) | 744 | 21.24 | Providing and injecting chemical emulsion of approved manufacturer for Pre-construction Anti-termite treatment and creating a chemical barrier under and all around foundation/ column pits, back fill in immediate contact with foundation, wall trenches, basement excavation, junction of wall and floor, vertical fill around reinforced concrete walls of basement/ tanks and the top surface of plinth filling, external perimeter of the building, junction of pipes and conduits, etc. by treating at the rate of 5 litres of an emulsion concentrate of one percent concentration of CHLORPYRIFOC 20% EC ISI approved conforming (IS: 8944) (i.e. by diluting 5 litres of chlorpyrifoc 20% EC, with 95 litres of water) and spraying by high volume sprayer on one square metre surface area as per IS: 6313 (Parts II and III). Contractor shall give 10 years guarantee bond on court fee stamp paper of Rs. 100/-. | Sqm | 163 | 108 | 17,566 |
| | | | (Plinth area/ plan area of the building at ground floor only shall be measured for the payment under this item. Anti-termite treatment to other areas such as excavations, foundations, wall foundations, junctions, etc. shall be deemed to be included in the rate). | | | | |
| SUB TOTAL OF EARTH WORK | | | | | | | 1,82,407 |
| 2.00 | | | CONCRETE WORKS | | | | |
| 2.10 | | | PLAIN CEMENT CONCRETE | | | | |
| | | | Note: For all plain concrete : | | | | |
| a) | 832 | 24.01 | Providing and laying in position plain cement concrete of M10 grade with 20mm downgraded coarse aggregate for leveling course/ fill under foundations, footings, basement rafts, steps, walls, platforms, ground floor, slabs on grade, sumps, manholes, and as plinth protection or as specified by Structural consultant / EIC etc., at any depth/ all levels, including centering, shuttering, scaffolding, vibrating, compacting, curing, removal of formwork, dewatering, all lead and lifts, in layers of specified thickness in alternative bays not exceeding 10 sqm etc. all complete and as directed for the following mixes. Without Vapour Barrier. | Cum | 3 | 5,830 | 20,015 |
| SUB TOTAL OF PLAIN CEMENT CONCRETE | | | | | | | 20,015 |
| 2.20 | | | REINFORCED CEMENT CONCRETE | | | | |
| | | | Note: For all reinforced concrete : | | | | |
| 2.2.1 | | | Providing and laying Cast in situ/Ready Mix concrete M-25 of trap/granite/quartzite/gneiss metal for R.C.C. work in foundations like raft, strip foundations, grillage and footings of R.C.C. columns and steel structures etc. including bailing out water, Steel centering, formwork, cover blocks, laying/pumping, compaction and curing roughening the surface if special finish is to be provided (Excluding reinforcement and structural steel etc.) etc. complete, with fully automatic microprocessor based PLC with SCADA enabled reversible Drum Type mixer/concrete Batch mix plant (Pan mixer) etc. complete. With fine aggregate (Crushed sand VSI Grade) | | | | - |
| a) | 842 | 25.13 | Footing (M-25) | Cum | 7 | 7,287 | 53,122 |
| b) | 866 | 26.19 | Retaining Wall (M-25) | Cum | | 15,750 | - |
| c) | 847 | 25.33 | Column (M-25) | Cum | 4 | 8,600 | 37,152 |
| d) | 852 | 25.52 | Plinth Beam (M-25) | Cum | 5 | 12,452 | 67,171 |
| f) | 562 | 26.07 | Slab (M-25) | Cum | 0 | 14,116 | - |
| 2.30 | 1022 | 33.30 | Providing and laying in situ cement concrete M20 with TREMIX TREATMENT for 100 MM thickness for flooring with groove cutting of 4mm wide and 20 mm deep with necessary refilling with bitumen etc. complete. | Sq.M | 163 | 769 | 1,25,079 |
| SUB TOTAL OF REINFORCED CEMENT CONCRETE | | | | | | | 2,82,525 |

| | | | | | | | |
|---|-----|-------|---|------|-----|-----------------|------------------|
| 3.00 | | | STEEL WORKS | | | | |
| 3.10 | | | STEEL REINFORCEMENT | | | | |
| | | | Basic Steel Rate:- Rs 63000/MT. | | | | |
| | | | Note: This items may also be a free issue item by Employer. | | | | |
| 3.1.1 | 876 | 26.33 | High yield strength deformed bars conforming to IS:1786 with Fe = 500 N/sq.mm | MT | 2 | 89,703 | 1,77,738 |
| 3.20 | 829 | 23.09 | Providing and fixing mild steel grill gate as per the detailed drawing including hinges, locking arrangements and painting in three coats of oil paint of approved colour and shade etc. complete.(weight 18 Kilogram. to 20 Kilogram. Per Sq.m.) Spec.One Number: As directed by Engineer- in-charge. | SQ.M | 30 | 2,100 | 63,000 |
| 3.30 | | | Structural Steel E-350 (TATA / JSW / Equivalent Make) | | | | |
| | | | Supplying, fabricating, erecting and fixing in position of steel structures at all elevations using fusion welding quality steel E-350 (Fe490) conforming to IS:2062 - 2006. Rate shall include cost of cutting, welding, splice plates and packing plates, transporting, straightening, cleaning, fabricating and erecting in position welded/bolted Structural steelwork in columns, beams, trusses, purlins, platforms, ladders, monorails, staircases ,supports, strengthening of steel members etc. at site to line and level, supply of approved bolts/nuts/washers etc. complete as per drawings including painting as per G4/G5/G6 before erection and all materials and labour charges etc., complete and including Sand blasting & painted with 1 coats of enamel paint (Berger EPILUX SG – HHI 664002) of 35-50 micron each coat with air less spray gun over a coat of zinc chromate primer - 35-50 micron etc., complete as shown in drawings, as per specifications and as directed by the Engineer-in-Charge / Construction Manager. (The rate quoted shall include cost of bolts, nuts, washers, welding and electrodes required for the complete work). | MT | 3.0 | 1,00,000 | 3,00,000 |
| 3.40 | | | Structural Steel - Cold Formed Light gauged (Essar / TATA / JSW OR EQUIVALENT Make) | | | | |
| | | | Supplying, fabricating and erecting of Cold Formed Light Gauge structural steel members conforming to IS:801/ IS:811 hot-dip galvanised to IS:4759 - 96 including cutting, welding or bolting, splice plates and packing plates, transporting, straightening, cleaning, fabricating and erecting in position. | MT | 2.0 | 90,000 | 1,80,000 |
| 3.50 | | | Sheeting | | | | |
| | | | PPGL 0.5 mm thk | | | | |
| | | | Supply & Fixing of PPGI sheets of 0.5 mm thick as shown in drawing or as directed by engineer incharge with all necessary accessories.(Essar) Make) | MT | 2.0 | 1,10,000 | 2,20,000 |
| 3.60 | | | Roof Accessories | | | | |
| | | | Supply & Fixing of 0.5 mm thk PPGL roof accessories as per drawing or as directed by engineer incharge- | | | | |
| 3.6.1 | | | CORNER FLASHING | RMT | 24 | 350 | 8,400 |
| 3.6.2 | | | Center Ridge | RMT | 12 | 515 | 6,180 |
| 3.6.3 | | | Gable flashing | RMT | 35 | 515 | 18,025 |
| 3.70 | | | Roof Gutter | | | | |
| | | | Roof Gutter (Assumed Girth- 600 mm) PPGI 0.5 mm Thk. | | | | |
| | | | Supplying, fabricating and erecting in position PPGI Eaves Gutter of required size with stop ends,all fixing accessories, drop ends, etc., at all elevations levels & heights including aligning, leveling, providing and fixing bolts, nuts, washers etc., conforming to latest specification including straightening, cutting, welding, bending to shape, bolting etc., complete and as directed as per engineer incharge | RMT | 23 | 515 | 11,845 |
| 3.80 | | | Downtake Pipe | | | | |
| | | | Providing and fixing of the rain water down take pipes of PPGI, the sectional area of rain water down take pipes provided shall be generally at the rate of 1 square cm per 70 to 80 square decimetre of roof area drained. No spout shall be less than 80 mm in diameter. The spacing of spouts shall be arranged to suit the position of openings in the wall including necessary accessories for fixing the pipe and including all materials and labour charges etc., complete as shown in drawings, as per specifications and as directed by the Engineer-in-Charge / | RMT | 36 | 450 | 16,200 |
| 3.90 | | | Polycarbonate Sheet | | | | |
| | | | Supply & Fixing of 2mm thk polycarbonate sheets as per drawing & as directed by engineer in-charge. | SQ.M | 9 | 14,000 | 1,26,000 |
| 3.10 | | | Turbo Ventilator | | | | |
| | | | Supply & Fixing of turbo ventilator with 610 mm throat, having base ring & top plate in stainless steel of 0.8 mm thick, rotated using twin bearings of SKF - 600122 & 600322 permanently lubricated & sealed. Fixed in FRP base plate of 2mm thk clear 1.020 mtr wide & 1.7 mtr long. | N0.s | 0 | | - |
| SUB TOTAL OF STEEL REINFORCEMENT | | | | | | | 11,27,388 |

| B CIVIL WORKS | | | | | | | |
|----------------------------------|-----|-------|---|------|--------------|-----------------------|-----------------------|
| 4 MASONRY | | | | | | | |
| It. No. | | | DESCRIPTION | Unit | QUANT ITY | UNIT RATE (Rs.) | TOTAL AMOUNT (Rs.) |
| 4.10 | | | Providing and constructing Solid Concrete Block masonry in proper line and level at all levels in cement mortar 1:6 / 1:4 (as mentioned in the item) using standard size of Blocks as 400 x 200mm of thickness as given below, with minimum compressive strength of each block not less than 5 N/Sq.mm including all scaffolding, staging, curing, all lifts, raking of joints, all labour, hire and fuel charges for all tools and plants employed etc. complete and as directed. Rate shall include providing Concrete Binders in proportion of M-20 concrete, 75mm thick reinforced with 2 nos. of 8 mm dia Fe 500 bars, RCC binders to be at every 1 metre interval from floor level. The rate to be inclusive of cost of reinforcement and formwork, cement mortar, cover blocks for reinforcement and all other incidental charges etc., all complete and as directed. The rate to also include closing the gap between the masonry and RCC beam / slab finished to required slope as directed by the Engineer-in-charge. Note:- The width of the joints not to exceed 10mm. | | | | |
| a) | 900 | 27.08 | 100mm thick block in cement mortar 1:4 | Cu.m | 0 | 9525 | - |
| b) | 897 | 27.05 | 230mm thick block in cement mortar 1:6 | Cu.m | 47.9504 | 7994 | 3,83,315 |
| TOTAL OF MASONRY WORKS | | | | | | | 3,83,315 |
| 5 PLASTERING | | | | | | | |
| 5.10 | 963 | 32.04 | Providing and applying in one coat, 12mm thick Plaster on Internal surfaces of RCC/ brick/block walls in cement mortar 1:4, finished smooth with extra cement finishing, with cement not less than 2.2 kg per Sqm. Rate shall include for scaffolding, grooves, sills, pattas, curing, surface preparation before the application of plaster, providing PVC fibre mesh as mentioned in the notes above to a width of 150mm at the junctions of masonry and concrete works including tying in position by using suitable nails / clamps / screws and as directed etc. complete at all levels. The contractor shall make good the grooves, pockets etc. after the scaffolding is removed. | Sqm | 156.36 | 278 | 43,468 |
| 5.20 | 969 | 32.12 | Providing and applying 25mm thick External Sand face Plaster in two coats for external surfaces of masonry, RCC, pergola, Chajja etc. with a base coat of 15mm thick in cement mortar 1:4 with the addition of water proofing compound of approved make and 100% virgin polypropylene fibres as mentioned in the notes above and finishing or final coat of 10mm thick in cement mortar 1:5 after roughening the surface of first coat in green condition with a wire brush and clearing of loose particles. The rate to be inclusive of sponge finish by taking out grains, all complete as per specification and as directed. The rate should also be inclusive of all scaffolding for single as well as double/multiple height areas, surface preparation, curing both the coats, sills, pattas, grooves, providing PVC fibre mesh as mentioned in the notes above to a width of 150mm at the junctions of masonry and concrete works including tying in position by using suitable nails / clamps / screws and as directed etc. complete at all levels. | Sqm | 208.48 | 563 | 1,17,374 |
| TOTAL OF PLASTERING WORKS | | | | | | | 1,60,842 |

| 6 PAINTING & FINISHING | | | | | | | |
|--|------|--------|--|------|--------|-------|---------------|
| 6.10 | 1103 | 36.03 | Providing and applying white-wash in two coats on old/new plaster do masonry surfaces and asbestos cement sheets including scaffolding and preparing the surface by brushing and brooming down etc. complete. | Sqm | 364.84 | 12 | 4,378 |
| 6.20 | 1105 | 36.05 | Providing and applying colour-wash of approved colour and shade in two coats to news urface including scaffolding, brushing and brooming down (excluding base coat of white-wash) etc. complete. | Sqm | 364.84 | 19 | 6,932 |
| TOTAL OF PAINTING & FINISHING WORKS | | | | | | | 11,310 |
| 7 ELECTRICAL WORKS | | | | | | | |
| 7.1 | 1526 | 44.18 | Providing and fixing liohtening conductor system comprising of erecting Air - Termination consisting of tubular copper rod of 25 mm dia.1.2 mm thick with multiple point shead 1.2mt.long (Heavy Duty)welded or clamped to G.I. pipe pole B grade 50 mm dia of required length with M.S . round base plate 25 Cm diamand 10 mm thick at bottom embeded in cement concrete 1:3:6 foundation of size 45 cm dia m x 45 cm Height and providing earthing with copper earth plate of size 60 x 60 x 0.3 cms with cad mium plate nut bolts to fix earthing strip burried in specially prepared earth pits 1.5 metre below ground level with 40 Kilogram charcoal and salt with alternate layers of charcoal and salt and G.I. pipe 40 mm dia2 meter length burried in earthing plate remining portion above ground level for watering and refilling compete Note-Copper strip from lightning conductor is not considered in this item. | Nos. | 1 | 25784 | 25,784 |
| 7.2 | 1527 | 44.19 | Providing and fixing copper strip 25 mm wide and 3 mm thick for lightning conductor including fixing with screws required scaffolding etc.complete Note-Lightening conductor and earthin pits is not considered in this item | Nos. | 25 | 793 | 19,825 |
| 7.3 | - | 1-2-4 | Supplying and erecting HMS PVC conduit FRLS Grade 25 mm dia. With pvc accessories on wall/ ceiling as per specification No. WG-MA/ CON | M | 50 | 96 | 4,800 |
| 7.4 | - | 1-3-1 | Supplying and erecting mains with 1X1.5 sq. mm. FRLSH copper PVC insulated wire laid in provided conduit/trunking/inside pole/Buss bars or any other places as per specification No. WG-MA/CON | M | 50 | 20 | 1,000 |
| 7.5 | - | 1-3-1 | Supplying and erecting mains with 2X1.5 sq. mm. FRLSH copper PVC insulated wire laid in provided conduit/trunking/inside pole/Buss bars or any other places as per specification No. WG-MA/CON | M | 100 | 40 | 4,000 |
| 7.6 | - | 1-3-2 | Supplying and erecting mains with 2X2.5 sq. mm. FRLSH copper PVC insulated wire laid in provided conduit/trunking/inside pole/Buss bars or any other places as per specification No. WG-MA/CON | M | 100 | 62 | 6,200 |
| 7.7 | - | 1-6-11 | Supplying and erecting modular type 3pin 6/16 A multry sockets with safety shutter, duly erected on provided plate and box with wiring connections complete | Nos | 10 | 160 | 1,600 |
| 7.8 | - | 1-6-30 | Supplying and erecting PVC surface maodular switch box with double mounting plate for 6 module duly erected | Nos | 10 | 222 | 2,220 |
| 7.9 | - | 1-6-32 | Supplying and erecting PVC surface maodular switch box with double mounting plate for 12 module duly erected | Nos | 10 | 343 | 3,430 |
| 7.10 | - | 2-7-4 | Supplying and erecting street light wall bracket made from 40 mm dia G I pipe 1.2 m in total length complete as per specification no FG- BKT/WB | Nos | 10 | 822 | 8,220 |
| 7.11 | - | 5-3-2 | Supplying, erecting and marking SPMCB 6A to 32 A, C series with rated short - circuit braking capacity 10kA in provided distribution board as per specification no SW-SWR/MCB | Nos | 10 | 174 | 1,740 |
| 7.12 | - | 9-1-1 | Providing earthing with galvnised iron earth plate size 60 X 60 C 0.6 cm complete with all materials, testing and recording the result as per specification no EA-Ep | Nos | 2 | 4714 | 9,428 |
| TOTAL OF ELECTRICAL WORKS | | | | | | | 88,247 |

| 8 ROAD WORKS | | | | | | | |
|----------------------------|--------|-------|--|------------|------|--------|--------|
| 8.10 | 88.00 | 2.11 | Excavation for roadway in earth , soil of all sorts , sand, gravel or soft murum including dressing section to the required grade , camber and side slopes and conveying the excavated materials with all lifts up to a lead of 50m .and spreading for embankment or stacking as directed. | Cum | 0.00 | 119.00 | 0.00 |
| 8.20 | 102.00 | 2.28 | Providing earth work in embankment with approved materials obtained from other sources upto lead of 50m . including all lifts , laying in layers of 20cm. to 30cm .thickness breaking clods , dressing to the required lines , curves , grades & section , watering and compaction with vibratory roller with V -Satatt achment to achieve not less than 97% of standard proctor density etc. complete (Material obtained from Other sources) | Cum | 0.00 | 757.00 | 0.00 |
| 8.30 | 103.00 | 2.29a | Supplying hard murum / kankar at the road site , including conveying and stacking complete. | Cum | 0.00 | 598.00 | 0.00 |
| 8.40 | 105.00 | 2.30 | Spreading hard murum/ soft murrum/ gravel or kankar for side width complete | Cum | 0.00 | 79.00 | 0.00 |
| 8.50 | 97.00 | 2.23 | Wateringandcompactingofembankmentformedofmaterialsobtainedfromtheroadcuttingwithinaleadof50m,notlessthan97%ofstandardProctordensityafterlayingthem in layers of 20 cm. to 30 cm. with vibratory roller. | Cum | 0.00 | 91.00 | 0.00 |
| 8.60 | 106.00 | 2.31 | Compacting the hard murum side widths including laying in layers one ach side with vibratory roller including artificial watering etc. complete | Sq.m | 0.00 | 21.00 | 0.00 |
| TOTAL OF ROAD WORKS | | | | | | | - |
| 9.00 | - | - | Prviding and managing 20 Trees in the same premises, under Management Strategies And Implementation Plan (MSIP) to Manage Environmental , Social , Health And Safety. | Lumsu m | 20 | 1000 | 20,000 |