Construction of Agriculture Marketing Centre with Facilities for Solid Waste Management, Drainage & Toilet in Kumbadaje Gram Panchayat

Detailed Project Report (DPR)

SUBMITTED TO KERALA LOCAL GOVERNMENT SERVICE DELIVERY PROJECT (KLGSDP)

Prepared By

Centre for Rural Management (CRM), Kottayam, Kerala

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Chapter 1

INTRODUCTION & PROFILE OF THE GRAM PANCHAYAT

INTRODUCTION

The document contains the detailed project report (DPR) of the ***Construction of Agriculture Marketing Centre with Facilities for Solid Waste Management , Drainage & Toilet*** in Kumbadaje which has been prepared for the Kumbadaje Gram Panchayat of Kasargodu District in Kerala with the technical support of Centre for Rural Management, (CRM) Kottayam. The project is finalized by the joint sitting of the Project Management Unit of the Kerala Local Government Service Delivery Project (KLGSDP) and the functionaries of the Kumbadaje Gram Panchayat. It is identified based on the socio economic conditions, the index of backwardness and the aspirations of the local citizens of the Panchayat. Participatory rural rapid appraisal tools were administered for the identification and prioritization of the Project.

PROFILE OF KUMBADAJE PANCHAYAT

Kumbadaje Gram Panchayat is in Karadukka Block of Kasargodu District. The total area of the Panchayat is 31.03sq km. The east side of the Panchayat is Karadukka and Beloor Gram Panchayats, west side is Badiyadukka Gram Panchayat, south side is Chenkala and Karadukka Gram Panchayats and north side is Enmakaje and Badiyadukka Gram Panchayats. Majority of the people in the Panchayat are agriculturists and the major crops are arecunut,(47.79%), coconut (16.33%), rubber (16.59%) pepper (3.01%), paddy(6.02%) and plantain(2.3%). In addition to this cashew (3.52%) is also cultivated in the area. Total there are 2327 ha. of land under cultivation .There are ten *padashakaram samithis* for paddy cultivation. Though there are 7 perennial ponds, 12 stream and small rivulets, and number of public and private tube wells for irrigation, the required water is quite in sufficient for irrigation, particularly for paddy cultivation. There are total 13

wards in the Gram Panchayat. The total number of the households in the Panchayat is 2787. The density of population is 476 persons per sp.km. The total population of the Panchayat is 14772 among which 7370 are males and 7402 are females. The literacy rate of the Panchayat is 76.50 percent. Whereas the male literacy rate is 81 per cent and female literacy rate is 72 per cent. The sex ratio of the Panchayat is 1004. Out of the total population, 10.09 per cent are SC category and 0.26 per cent is ST category. Out of the total households in the Panchayat, 48.83 (1361) per cent belongs to BPL category, as per the recent BPL list. In the Panchayat, there are 24 recognized SC colonies with 255 households. The colonies are spread throughout the Panchayat, except in two wards (ward number iii & v). Among the SC community, some of them are Theyyam artists. There are 153 households under STs and they belong to two categories, *Marathi and Mavilan* .Under *Mavilan* category there are only 4 families.

SECTOR PRIORITY (AGRICULTURE)

Sector priority was made by the Panchayat with the support of Centre for Rural Management (CRM), Kottayam. The purpose was to assess the backwardness and to identify sector and essential projects which have the potential for sustainable local economic development and ensuring social justice. The potential projects under sectors were identified through three FGDs conducted in different parts of the GP and followed by transect walk. Discussions/consultations with the senior citizens and social workers in the Panchayat were also arranged to gather expert opinion. To begin with the sector analysis in very precise, the consulting team (Centre for Rural Management) had a detailed discussion with the President, Vice President and other members of the GP on 31 May 2016. Subsequently, four Focus Group Discussions (FGDs) in different parts of the GP on 9th & 10th June were conducted and followed by transect walk on the same dates. Representatives of the political parties, members from community based organizations, teachers, *anganwadi* workers as well as members from *kudumbasree* were invited for active participation in the FGDs and to share their views and suggestions in prioritizing the projects. While assessing the socio economic conditions and the index of backwardness of the Panchayat, all the sectors were analyzed in detail. And based on the detailed sector analysis, Agriculture was identified as one of the priority sectors which need urgent attention.

PROJECT RATIONAL OF THE CONSTRUCTION OF AGRICULTURE MARKETING CENTRE WITH FACILITIES FOR SOLID WASTE MANAGEMENT, DRAINAGE & TOILET

Facilities like market place for agriculture produces, agro clinic (farmer's hub), outlet for *Kudubashree* produces, start-up/skill development facilities for unemployed youth (included educated boys & girls) public gathering (community hall), public library, place for display of handicrafts (*Theyyam* related and other products of the rural artisans), and also a comfort station are essential to provide minimum service facilities for the people in the Panchayat. A citizen centric community service centre would be a strategic intervention to address such backwardness. This could also be used as a place of skill development for the marginalized. Adequate land is available with the Panchayat in the heart of the Jaya Nagar junction, a growth centre with much potential. The existing plot of land with the Panchayat is sufficient for the proposed development project. Majority of the people in the Panchayat are agriculturists and the major crops are arecunut, (47.79%), coconut (16.33%), rubber (16.59%) pepper (3.01%), paddy (6.02%) and plantain(2.3%). In addition to this, cashew (3.52%) is also cultivated in the area. Total there are 2327 ha. of land under cultivation .There are ten *padashakaram samithis* for paddy cultivation. Paddy had been a flourishing crop in the Panchayat, till recently .The preference now is for cash crops. It has made a negative impact in the food security of the Panchayat. Climate change has also made its impact on the cropping pattern. Though there are 7 perennial ponds, 12 stream and small rivulets, and number of public and private tube wells for irrigation, the required quantity of water is not available for agriculture, particularly for paddy cultivation. Farmers are the backbone of Kumbadaje Panchayat. All households depend on Agriculture either as farmers or as agricultural labourers. Majority own land, but the size of holding is on an average below two hectares. There are few households who own no land. They work as daily laborers in the nearby farms. In the Panchayat as a whole there are only a few persons who are in the service sector. The

number of BPL households in each ward is comparatively higher. Certain parts of the area are rocky and unfit for cultivation. For example, the Panchayat is having 4 acres of rocky land which is not suited for any agricultural purposes. Near the river side and such other fertile parts of the Panchayat, coconut, arecanut, cocoa, paddy etc are the crops grown.

Kumbadaje is a Panchayat close to Kasargodu, Mangalore and other parts of the State of Karnataka. But the farm produces are not being transported to such markets due to lack of proper means of transport and communication. Farmers are not even aware of the changing trends in production, grading, processing and marketing. Production would get enhanced and cost could get minimized if modern farm practices are accepted and adopted in the field .The consulting team could see the same old pattern of farm practices and ways of marketing. There is *Soil Health Card Scheme, Pradhen Mandhri Sinchai Yojana , Fazal Bhima Yojana, etc.* and the *Govt* .motivated organic farming. Such farmer friendly schemes have yet to reach the farm and the farmer of Kumbadje Panchayat.

Arecanut has now become a prominent cash crop of the area. Along with nuts, *palla* (palm tree leaf) is also available in plenty in such plantations. In certain places this *palla* is used for making plates for serving food materials. Being degradable and eco-friendly the product has wide acceptability. Even though the processing is through simple techniques; such practice has not been commercially practiced in the Panchayat. Similarly such other crop residues and farm degradable materials could have been economically utilized. Women and men who are unemployed would have got employment opportunities if such labour intensive initiatives had been adopted.

It is proposed to construct one complex in the premises of the existing Panchayat office building .The Panchayat has own land at the centre of the Jayanagar Junction, which has the spatial potential to be the growth centre of the Panchayat . The project, **'Construction of Agricultural Marketing Centre with Facilities for Solid Waste Management, Drainage and Toilet'** was suggested by many in all the three FGDs. It is suggested that such a project would be beneficial to the people of the entire Panchayat. Through this project the Panchayat can provide better service to the people. And also it would be a

potential source of regular income by renting out the common facility services in the marketing centre. Through this project, the Panchayat can provide better marketing service to the people. The GP can provide space to *kudumbasree* units and other social entrepreneurship/startup units for small community business and also can conduct training programmes .The centre can be nurtured as a business (agriculture) hub as well as a centre for skill development of women and the youth. In the market economy such services may not be provided by private enterprise.

Chapter 2

PROJECT NAME, LOCATION AND OBJECTIVES

NAME OF THE PROJECT: *Construction of Agriculture Marketing Centre with Facilities for Solid Waste Management, Drainage & Toilet in Kumbadaje Gram Panchayat*

MAIN OBJECTIVE OF THE PROJECT

Construction of Agricultural Market with all modern facilities

SUB OBJECTIVES

- To elevate the economic condition of the farmers by creating space for marketing agriculture produce.
- Infrastructural updradation by constructing an agriculture marketing centre
- To ensure proper grading and storage of agriculture produce.
- To establish agro clinic for the farming community
- To make available infrastructure for farmer's business hub
- To construct provision for solid & liquid waste management, and
- To construct a comfort station
- To provide facilities for public gathering
- To establish an outlet for *Kudubashree* produces
- To enable a wifi zone

PROJECT LOCATION

Ward Number: 11

Place Name: Jaya Nagar junction, Kumbadaje Gram Panchayat, Kasaragod District

Survey Number: Rs no 477/pt

LAND DETAILS

Ownership particular: The land for the proposed construction is owned by the Gram Panchayat

Land Size: Four Acres of land is with the Panchayat. Sizeable volume will be demarcated for the proposed project. :

Site Plan (Attached)

PHYSICAL INFRASTRUCTURE

The project has the following component

Agricultural Marketing Center:

Solar Power Unit:

Solid and Liquid Waste Management Unit:

Bio Gas Plant:

Rain Water Harvest:

Comfort Station:

Wifi Zone:

PROJECT DESIGNS

Drawing for the Agricultural Marketing Center

Drawing for Solar Power Unit (Inbuilt)

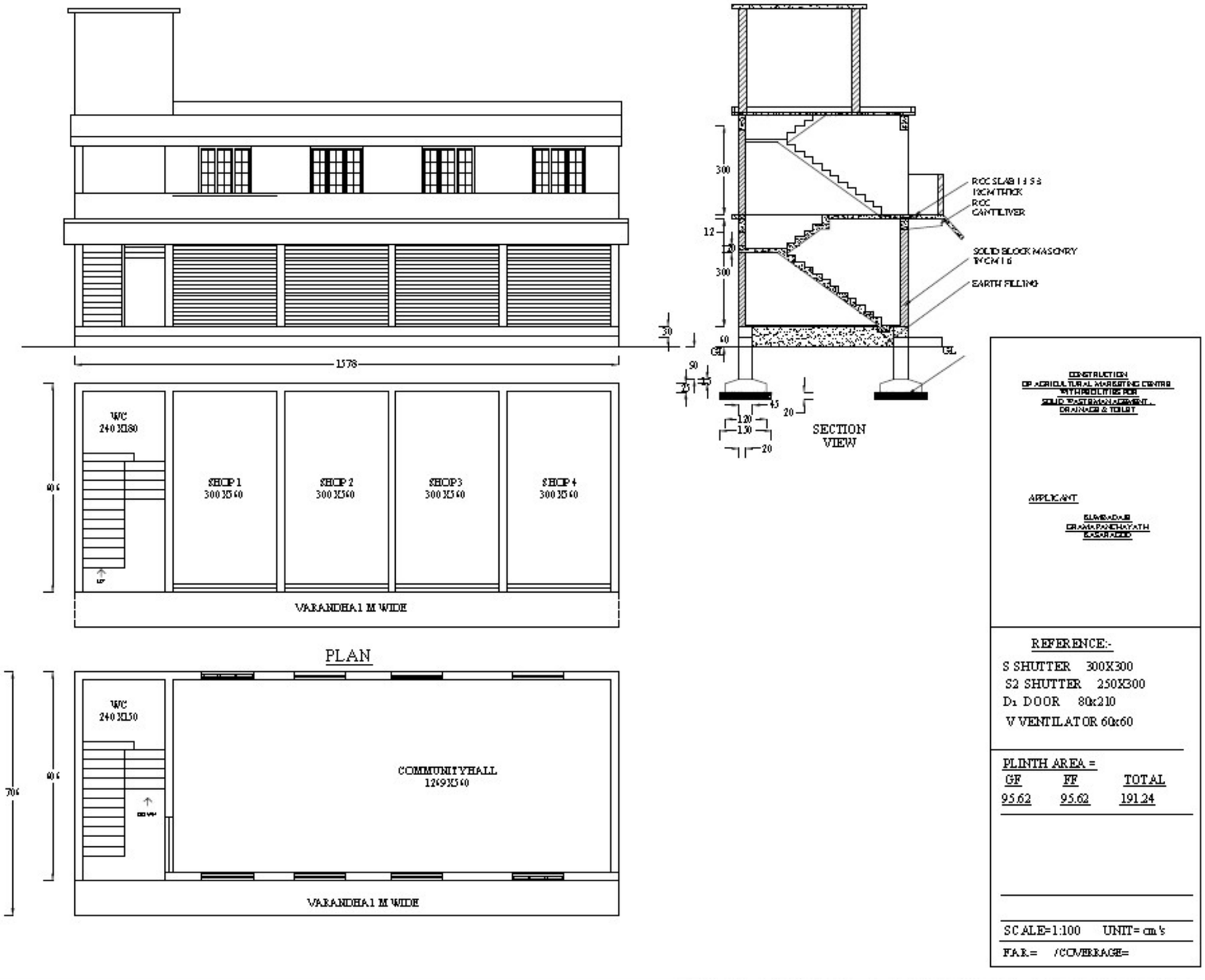
Drawing for Solid and liquid waste management unit (Inbuilt)

Drawing for Rain Water Harvest (Inbuilt)

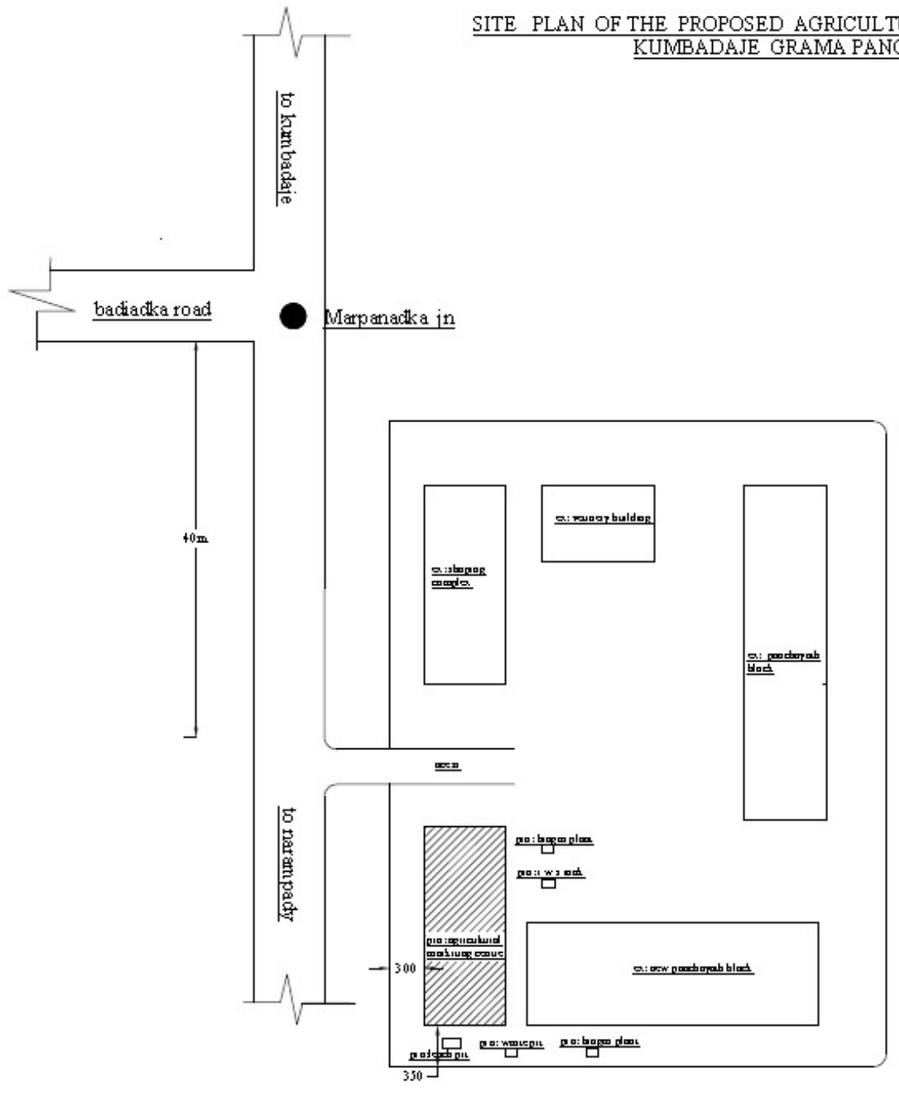
Drawing for Solar Power Unit (Inbuilt)

Drawing of Comfort Station (Inbuilt)

PROJECT DESIGNS



SITE PLAN OF THE PROPOSED AGRICULTURAL MARKETING CENTE
KUMBADAJE GRAMA PANCHAYATH



NORTH

SCALE= 1:400

UNIT= C.METRE

VILLAGE= kumbadaje

WARD: JAYANAGAR(XIII)

S NUMBER

AREA :

APPLICANT

KUMBADAJE
GRAMA PANCHAYATH
KASARAGOD

PREPARED BY:- .... BELLUR HOME ..... BUILDERS .... MARPANADKA....PH : 9847717873 SHARATH HK

ENVIRONMENTAL ISSUES (IFANY) AND PROTECTIVE MEASURES

The construction and its operation of the center do not create any environmental issues. The biodegradable waste in the form of solid & liquid and the proposed unit attached will address it, scientifically. Capacity of the solid & liquid waste management unit is decided and designed by assessing the total volume of the waste to be produced in the proposed center. This building is planned in a such a manner that it minimizes environmental impact and takes advantages of the site upon which it is built with environmental landscaping, rainwater harvesting, solar power generation, and other relevant features.

QUALITY ASSURANCE

Quality Assurance Plans are a key component of a systematic planning process. It provides a framework for how data will be collected to achieve specific project objectives, and describes the procedures that will be implemented to obtain data of known and adequate quality. A well-planned assurance plan helps ensure that collected data can be used in decision making. A two- tier quality management mechanism has been suggested for the proposed construction of the center. The first level of quality management mechanism is in -house quality control at the level of implementing agency. The second level ensures quality monitoring through Panchayat level monitoring committee. Photographs of all the important states of the work will be ensured as another mechanism to assure quality. After the Construction, quality assurance is important in the case of maintenance. As in the case of quality assurance at the construction stage, a two- tier quality management mechanism has been suggested for the maintenance of the agricultural marketing center authority. The first tier quality management mechanism is at the stakeholder level whereas the second tier provides for quality monitoring through the Panchayat committee. Quality assurance and quality control are integral components of a Quality Assurance Project Plan. In addition, there are four key elements: project management, measurement/data acquisition, assessment and oversight, and data validation and usability which are examined in a later stage in this report.

Chapter 3

FINANCIAL DETAILS

Details on Cost Estimate

WORK NAME: CONSTRUCTION OF AGRICULTURAL MARKETING CENTRE WITH FACILTIES (INCLUDING PUBLIC TOILETS) KUMBADAJE GRAMA PANCHAYATH, KASARAGOD						
ABSTRACT FOR THE PROPOSAL						
SL NO	**DSR14**	**Description**	**Unit**	**Quantity**	**Rate**	**Amount (Rs)**
1	2.6.1	Earth work in excavation by mechanical means (Hydraulic excavator) / manual means over areas (exceeding 30cm in depth. 1.5 m in width as well as 10 sqm on plan) including disposal of excavated earth, lead upto 50m and lift upto 1.5m, disposed earth to be levelled and neatly dressed. All kinds of soil	M^3	46	211.91	9747.94
2	4.1.8	Providing and laying in position cement concrete of specified grade excluding the cost of centering and shuttering - All work up to plinth level	M^3	12	5857.736	70292.83
3	7.1.1	Random rubble masonry with hard stone in foundation and plinth including levelling up with cement concrete 1:6:12 (1 cement : 6 coarse sand : 12 graded stone aggregate 20 mm nominal size) upto plinth level with : Cement mortar 1:6 (1 cement : 6 coarse sand)	M^3	20	5336.09	106721.89
4	OD	Dry rubble masonry with hard stone in superstructure plinth level and upto floor five level including cost of all materials, labour etc :	M^3	13	3450.87	44861.26
5	2.25	Filling available excavated earth (excluding rock) in trenches,plinth, sides of foundations etc. in layers not exceeding 20cm in depth, consolidating each deposited layer by ramming and watering, lead up to 50 m and lift upto 1.5 m. cum 112.40	M^3	65	153.078	9950.04
6	5.1.2	Providing and laying in position specified grade of reinforced cement concrete, excluding the cost of centering, shuttering, finishing and reinforcement - All work up to plinth level 1:1.5:3 (1 cement : 1.5 coarse sand : 3 graded stone aggregate 20 mm nominal size	M^3	12	8484.905	101818.86
7	OD	Laterate masonry with neatly dressed laterate stone of size 35X20X20cm or nearest size in cement mortar 1:6 for foundation and basement including all cost of materials, labour charges etc	M^3	70	**4254.53**	297817.10

8	9.1	Providing wood work (Anjili wood) in frames of doors, windows ,clerestory windows and other frames ,wrought framed and fixed in position with hold fast lugs or with dash fastners of required dia& length (hold fast lugs or dash fastner shall be paid for separately) D	M^3	0.2	88689.30	17737.86
9	10.6.1	Supplying and fixing rolling shutters of approved make, made of required size M.S. laths, interlocked together through their entire length and jointedtogether at the end by end locks, mounted on specially designed pipe shaft with brackets, side guides and arrangements for inside and outside locking with push and pull operation complete, including the cost of providing and fixing necessary 27.5 cm long wire springs manufactured from high tensile steel wire of adequate strength conforming to IS: 4454 - 1 and M.S. top cover of required thickness for rolling shutters 80x1.25 mm M.S. laths with 1.25 mm thick top cover.	M^2	45	2917.33	131279.67
10	5.8	Reinforced cement concrete work in vertical and horizontal fins individually or forming box louvers, facias and eaves boards up to floor five level, excluding the cost of centering, shuttering, finishing and reinforcement, with 1:1½:3 (1 cement : 1½ coarse sand : 3 graded stone aggregate 20 mm nominal size	M^3	60	9749.2	584952.00
11	5.22.6	Steel reinforcement for R.C.C. work including straightening, cutting, bending, placing in position and binding all complete upto plinth level.	Kg	1440.00	92.74539	133553.36
12	5.22A.6	Steel reinforcement for R.C.C. work including straightening, cutting, bending, placing in position and binding all complete above plinth Thermo mechanically treated bars.	Kg	6000	92.74539	556472.34
13A	5.9.1	Centering and shuttering including strutting, propping etc. and removal of form for : Foundations, footings, bases of columns, etc. for mass concrete.	M^2	25	267.55	6688.69
13B	5.9.5	Centering and shuttering including strutting, propping etc. and removal of form for : Lintels, beams, plinth beams, girders, bressumers and cantilevers.	M^2	180	452.38	81427.99
13C	5.9.6	Centering and shuttering including strutting, propping etc. and removal of form for : Columns, Pillars, Piers, Abutments, Posts and Struts.	M^2	80	617.44	49395.16
13D	5.9.3	Centering and shuttering including strutting, propping etc. and removal of form for Suspended floors, roofs, landings, balconies and access	M^2	250	547.00	136750.80

		platform				
13E	5.9.7	Centering and shuttering including strutting, propping etc. and removal of form for Stairs, (excluding landings) except spiral-staircases	M^2	30	538.83	16165.03
13F	5.9.19	Centering and shuttering including strutting, propping etc. and removal of form for :Weather shade, Chajjas, corbels etc., including edges	M^2	20	670.53	13410.57
14	9.48	Providing and fixing M.S. grills of required pattern in frames of windows etc. with M.S. flats, square or round bars etc. including priming coat with approved steel primer all complete.	Kg	420	160.66	67477.79
15	10.26.1	Providing and fixing hand rail of approved size by welding etc. to steel ladder railing, balcony railing, staircase railing and similar works, including applying priming coat of approved steel primer M.S. tube.	Kg	1000	142.59	142590.93
16	9.5.1	Providing and fixing panelled or panelled and glazed shutters for doors, windows and clerestory windows, including ISI marked M.S. pressed butt hinges bright finished of required size with necessary screws, excluding panelling which will be paid for separately, all complete as per direction of Engineer-in-charge.				0.00
	9.5.1.2	30 mm thick shutters	M^2	16	3277.14	52434.24
17	9.117.2	Providing and fixing factory made uPVC door frame made of uPVC extruded sections having an overall dimension as below (tolerance ±1mm), with wall thickness 2.0 mm (± 0.2 mm), corners of the door frame to be Jointed with galvanized brackets and stainless steel screws, joints mitred and Plastic welded. The hinge side vertical of the frames reinforced by galvanized M.S. tube of size 19 X 19 mm and 1mm (± 0.1 mm) wall thickness and 3 nos. stainless steel hinges fixed to the frame complete as per manufacturer's specification and direction of Engineerin-charge	M	5	275.31	1376.53

18	9.118.1	24 mm thick factory made PVC door shutters made of styles and rails of a uPVC hollow section of size 59x24 mm and wall thickness 2 mm (± 0.2 mm) with inbuilt edging on both sides. The styles and rails mitred and joint at the corners by means of M.S.galvanised/plastic brackets of size 75x220 mm having wall thickness 1.0 mm and stainless steel screws. The styles of the shutter reinforced by inserting galvanised M.S. tube of size 20x20 mm and 1 mm (± 0.1 mm) wall thickness. The lock rail made up of 'H' section, a uPVC hollow section of size 100x24 mm and 2 mm (± 0.2 mm) wall thickness, fixed to the shutter styles by means of plastic/galvanised M.S. 'U' cleats. The shutter frame filled with a uPVC multi-chambered single panel of size not less than 620 mm, having over all thickness of 20 mm and 1 mm (± 0.1 mm) wall thickness. The panels filled vertically and tie bar at two places by inserting horizontally 6 mm galvanised M.S. rod and fastened with nuts and washers, complete as per manufacturer's specification and direction of Engineer-in-charge. (For W.C. and bathroom door shutter)	M^2	2	3702.49	7404.97
19	13.16	6 mm thick cement plaster of c m 1:3 one coat floated hard and trowelled smooth for under side of slabs including watering curing etc. complete.under side of floor DAR	M^2	325	183.47	59629.27
20	13.7.1	12 mm cement plaster finished with a floating coat of neat cement floated hard and trowelled smooth ,including watering curing etc. complete.DAR 13.7.1 Top side of Roof	M^2	170	295.74	50275.34
21	13.4	Plastering with 1:4,12 mmthick one coat floated hard and troweled smooth for walls inside & out side watering curing etc.complete.DAR 13.4	M^2	300	234.66	70397.08
22	11.38	Providing and laying ceramic floor tiles of size 300x300 mm of first quality of approved make In all colours laid on 20 mm thick bed of cement mortar 1:4 including pointing the joints with white cement and matching pigment etc. complete.	M^2	140	1231.77	172447.33
23	11.36	Providing and fixing Ist quality ceramic glazed wall tiles conforming to IS:15622 of approved make in all colours shades, risers of steps and dados over 12mm thick bed of cement mortar 1:3 and jointing with grey cement slurry at 3.3kg/m2 including pointing in white cment mixed with pigment of matching shade complete.	M^2	20	1139.43	22788.62

24	13.48.1	Finishing with Deluxe Multi surface paint system for interiors and exteriors using Primer as per manufacturers specifications : Two or more coats applied on walls @ 1.25 ltr/10 sqm over and including one coat of special primer applied @ 0.75 ltr /10 sqm DAR 13.48.1	M^2	625	136.19	85118.75
25	13.48.2	Painting wood work with Deluxe Multi surface paint of required shade. : two or more coats applied @ 0.90 litr/10m2 over an under coat of primer applied @ 0.75 litr/10 m2 approved brand and manufacture	M^2	60	120.1196	7207.17
26	13.48.3	Painting Steel work with Deluxe Multi Surface Paint to give an even shade. Two or more coat applied @ 0.90 ltr/ 10 sqm over an under coat of primer applied @ 0.80 ltr/ 10 sqm of approved brand and manufacture	M^2	250	122.57	30642.98
27	11.2	Chequerred precast cement concrete tiles 22 mm thick in footpath & courtyard, jointed with neat cement slurry mixed with pigment to match the shade of tiles, including rubbing and cleaning etc. complete, on 20mm thick bed of cement mortar 1:4 (1 cement: 4 coarse sand).Medium shade pigment using 50% white cement 50% Grey cement	M^2	250	1515.114	378778.44
28	13.48.3	Provide and laying virtified floor tiles in different sizes (thickness to be specified by the manufacturer) with water absorption less than 0.08 % and conforming IS 15622, of approved make, in all colours and shades, laid on 20 mm thick cement mortar 1: 4 (1 cement :4 coarse sand), including grouting the joints with white cement and matching pigments etc. complete. size of tile 600X600 mm	M^2	120	1914.763	229771.60
		SANITARY ITEMS				
29	17.3.1	Providing and fixing white vitreous china pedestal type water closet (European type)with seat and lid ,10 litre white vitreous china flushing cistern & CP flush bend with fittings & brackets, 40 mm flush bend , over flow arrangement with specials of standard make and mosquito proof coupling of approved municipal design complete, including painting of fittings and brackets, cutting and making good the walls and floors wherever required:W.C. pan with ISI marked white solid plastic seat and lid	Nos	1	6516.15	6516.15

30	17.7.1	Providing and fixing wash basin with C.I brackets , 15 mmC.P brass pillartap ,32 mm C.P brass waste of standard pattern, including painting painting of fittings and brackets, cutting and making good the walls wherever required white vitreous china wash basin size 630X450 mm with a pair of 15 mm C.P brass pillar taps	Nos	4	3175.06	12700.22
31	17.70.1	Providing and fixing PTMT Bottle Trap for Wash basin and sink.Bottle trap 31 mm single piece moulded with height of 270 mm, effective length of tail pipe 260 mm from the centre of the waste coupling, 77 mm breadth with 25 mm minimum water seal, weighing not less than 260 gms	Nos	4	673.89	2695.57
32	18.51.1	Providing and fixing C.P. brass long body bib cock of approved quality conforming to IS standards and weighing not less than 690 gms.15 mm nominal bore	Nos	5	831.65	4158.23
33	17.72	Providing and fixing PTMT towel ring trapezoidal shape 215 mm long, 200 mm wide with minimum distances of 37 mm from wall face with concealed fittings arrangement of approved quality and colour, weighing not less than 88 gms.	Nos	4	297.58	1190.31
34	18.64	Providing and fixing PTMT swivelling shower, 15 mm nominal bore, weighing not less than 40 gms. DAR 18.64	Nos	3	193.05	579.14
35	OD	Providing and fixing PVC pipes, fittings including fixing the pipe with clamps at 1.00 m spacing. This includes jointing of pipes & fittings with one step PVC solvent cement and testing of joints complete as per direction of Engineer-in-Charge 20mm dia 10Kgf/cm2- Internal work - Exposed on wall.20mm External work - Exposed on wall.20mm External work - Exposed on wall	M	30	157.14	4714.08
36	OD	Providing and fixing PVC pipes, fittings including fixing the pipe with clamps at 1.00 m spacing. This includes jointing of pipes & fittings with one step PVC solvent cement and testing of joints complete as per direction of Engineer-in-Charge 20mm dia 10Kgf/cm2- Internal work - Exposed on wall.20mm External work - unfer trench	M	20	161.66	3233.19
37	OD	Providing and fixing PVC pipes including jointing of pipes with one step PVC solvent cement ,trenching, refilling & testing of joints complete as per direction of Engineer in Charge. 20 mm dia 10Kgf/cm2. 25mm Internal work - Exposed on wall	M	20	117.30	2346.01

38	OD	Providing and fixing PVC pipes, fittings including fixing the pipe with clamps at 1.00 m spacing. This includes jointing of pipes & fittings with one step PVC solvent cement and testing of joints complete as per direction of Engineer-in-Charge 25mm dia 10Kgf/cm2- Internal work - Exposed on wall.25mm External work - Exposed on wall	M	15	175.72	2635.75
39	OD	Providing and fixing PVC pipes, fittings including fixing the pipe with clamps at 1.00 m spacing. This includes jointing of pipes & fittings with one step PVC solvent cement and testing of joints complete as per direction of Engineer-in-Charge 25mm dia 10Kgf/cm2- External work - Exposed on wall.25mm External work - unfer trench	M	15	183.39	2750.86
40	OD	Providing and fixing PVC pipes including jointing of pipes with one step PVC solvent cement ,trenching, refilling & testing of joints complete as per direction of Engineer in Charge. 25 mm dia 10Kgf/cm2.	M	15	146.95	2204.22
41	OD	Providing and fixing PVC pipes, fittings including fixing the pipe with clamps at 1.00 m spacing. This includes jointing of pipes & fittings with one step PVC solvent cement and testing of joints complete as per direction of Engineer-in-Charge 32mm dia 10Kgf/cm2 - Internal work - Exposed on wall.	M	15	213.42	3201.32
42	OD	Providing and fixing PVC pipes, fittings including fixing the pipe with clamps at 1.00 m spacing. This includes jointing of pipes & fittings with one step PVC solvent cement and testing of joints complete as per direction of Engineer-in-Charge 32mm dia 10Kgf/cm2 - External work - Exposed on wall.	M	20	221.85	4437.04
43	OD	Providing and fixing PVC pipes including jointing of pipes with one step PVC solvent cement ,trenching, refilling & testing of joints complete as per direction of Engineer in Charge. 32 mm dia 10Kgf/cm2	M	30	168.24	5047.19
44	OD	Providing and fixing PVC pipes, fittings including fixing the pipe with clamps at 1.00 m spacing. This includes jointing of pipes & fittings with one step PVC solvent cement and testing of joints complete as per direction of Engineer-in-Charge 40mm dia 10Kgf/cm2-Internal work - Exposed on wall	M	15	282.65	4239.78

45	OD	Providing and fixing PVC pipes including fixing the pipe with clamps/ clips at 1.00 m spacing. This includes jointing of pipes with one step PVC solvent cement and testing of joints complete as per direction of Engineer-in-Charge 63mm dia 6Kgf/cm2 -External work - Exposed on wall	M	15	211.61	3174.12
46	OD	Providing and fixing PVC pipes including fixing the pipe with clamps/ clips at 1.00 m spacing. This includes jointing of pipes with one step PVC solvent cement and testing of joints complete as per direction of Engineer-in-Charge 110mm dia 6Kgf/cm2 -External work - Exposed on wall	M	15	317.79	4766.79
47	OD	Providing and fixing PVC pipes including jointing of pipes with one step PVC solvent cement ,trenching, refilling & testing of joints complete as per direction of Engineer in Charge. 110 mm dia 6Kgf/cm2	M	20	417.43	8348.61
48	OD	Providing and fixing PVC moulded fittings / accessories for Rigid PVC pipes, including jointing with PVC solvent cement - 63 mm dia Vent cowl	Nos	5	68.76	343.82
49	OD	Providing and fixing PVC moulded fittings / accessories for Rigid PVC pipes, including jointing with PVC solvent cement - 110 mm dia Elbow	Nos	5	188.80	944.01
50	OD	Providing and fixing PVC moulded fittings / accessories for Rigid PVC pipes, including jointing with PVC solvent cement - 110 mm dia Bend	Nos	5	177.17	885.83
51	OD	Providing and fixing PVC moulded fittings / accessories for Rigid PVC pipes, including jointing with PVC solvent cement - 110 x 110 x 110 mm dia Door Tee	Nos	5	257.97	1289.84
52	OD	Providing and fixing PVC moulded fittings / accessories for Rigid PVC pipes, including jointing with PVC solvent cement - 110 x 75 mm dia Reducer	Nos	5	97.62	488.08
53	OD	Providing and fixing PVC moulded fittings / accessories for Rigid PVC pipes, including jointing with PVC solvent cement - 75 x 63 mm dia Reducer	Nos	5	62.79	313.95
54	18.48	Providing and placing on terrace (at all floor levels) polyethylene water storage tank ISI 12701 marked, with cover and suitable locking arrangement and making necessary holes for inlet, outlet and overflow pipes but without fittings and the base support for tank DAR 18.48	Litre	1000	9.87	9870.06

55	18.19.1.1	Providing and fixing gun metal non-return valve of approved quality (screwed end) : 25 mm nominal bore : Horizontal DAR 18.19.1.1	Nos	3	560.08	1680.24
56	18.19.1.1	Providing and fixing gun metal non-return valve of approved quality (screwed end) : 32 mm nominal bore : Horizontal DAR 18.19.1.1	Nos	3	560.08	1680.24
57		Bio gas plant	LS			175000.00
58		Solid waste management	LS			100000.00
59		Rain water harvesting tank	LS			175000.00
60		solar pannel installation	LS			400000.00
		TOTAL				4693819.10
		ADD ELECTRIFICATION 10%				466180.90
		CONTIGENCIES				40000.00
		GRAND TOTAL				**5200000.00**
RUPEES FIFTY TWO LAKHS ONLY						

WORK NAME: CONSTRUCTION OF AGRICULTURAL MARKETING CENTRE WITH FACILTIES (INCLUDING PUBLIC TOILETS) KUMBADAJE GRAMA PANCHAYATH, KASARAGOD

DETAILED ESTTIMATE WITH CP

Sl No:	Code No: DSR 14	Specification	Nos:					x	L	x	B	x	H	≈	Qnty			Rate		/Unit		Amount (Rs)
1	2.6.1	Earth work in Excavation by mechanical means(Hydraulic Excavator) / manual means over areas (exceeding 30cm in depth, 1.5m in width as well as 10sqm on plan) including disposal of excavated earth, lead up to 50m and lift up to 1.50m, disposed earth to be leveled and neatly dressed. DAR 2.6.1 All kinds of soil																				
		Pillar	(	1	x	8	)	x	1.50	x	1.50	x	1.50	≈	27.00	m3						
		Wall all round	(	1	x	1	)	x	45.20	x	0.40	x	0.40	≈	7.23	m3						
		Inside wall all	(	1	x	1	)	x	22.40	x	0.30	x	0.30	≈	2.02	m3						
		Sock pit	(	1	x	1	)	x	3.00	x	2.00	x	1.50	≈	9.00	m3						
		Total													45.25	m3						
		Net qnty													46.00	m3	x	Rs:	211.91	/m3	≈	9747.94
2	4.1.8	Providing and laying in position cement concrete of specific grade excluding the cost of centering and shuttering (1:4:8 cement concrete using 40 mm metal) watering curing etc. complete.																				
		Pillar	(	1	x	8	)	x	1.50	x	1.50	x	0.20	≈	3.60	m3						
		Floor concrete	(	1	x	1	)	x	90.00	m2		x	0.08	≈	7.20	m3						
		varanda	(	1	x	1	)	x	16.00	m2		x	0.08	≈	1.28	m3						
		Total													12.08	m3						
		Deduction																				
		Inside wall area	(	1	x	1	)	x	22.40	x	0.40	x	0.08	≈	0.72	m3						
		deduction total													0.72	m3						
															11.36							
		Net qnty													12.00	m3	x	Rs:	5857.736	/m3	≈	70292.83
3	7.1 & 7.1.1	7.1 Random rubble masonry with hard stone in foundation and plinth including leveling up with cement concrete 1:6:12 (1 cement: 6 coarse sand: 12 graded stone aggregate 20 mm nominal size) up to plinth level with: 7.1.1 Cement mortar 1:6 (1 cement: 6 coarse sand)																				
		Foundation Wall all round	(	1	x	1	)	x	45.20	x	0.40	x	1.00	≈	20.00	m3	x	Rs:	5336.09	/m3	≈	106721.89
4	OD No: 28	Dry rubble masonry with hard stone in superstructure plinth level and upto floor five level including cost of all materials, labour etc :																				
		Foundation Inside Wall all	(	1	x	1	)	x	22.40	x	0.30	x	0.90	≈	6.05	m3						
		Sock pit Wall all	(	1	x	1	)	x	10.00	x	0.45	x	1.50	≈	6.75	m3						
															12.80	m3						
		Total													13.00	m3	x	Rs:	3450.87	/m3	≈	44861.26
5	2.25	Filling available excavated earth (excluding rock) in trenches, plinth, sides of foundations etc. in layers not exceeding 20cm in depth, consolidating each deposited layer by ramming and watering, lead up to 50 m and lift upto 1.5 m.																				
		floor area	(	1	x	1	)	x	90.00			x	0.60	≈	54.00	m3						

		varanda	(	1	x	1	)	x	16.00			x	0.45	≈	7.20	m3						
		Total													61.20							
														≈	65.00	m3	x	Rs:	153.078	/m3	≈	9950.04
6	5.1.2	Providing and laying in position specified grade of reinforced cement concrete, excluding the cost of centering, shuttering, finishing and reinforcement - All work up to plinth level : 1:1.5:3 (1 cement : 1.5 coarse sand : 3 graded stone aggregate 20 mm nominal size)																				
		Pillar foottings	(	1	x	8	)	x	1.20	x	1.20	x	0.20	≈	2.30	m3						
		Pillar foottings	(	1	x	8	)	x	0.90	x	0.90	x	0.15	≈	0.97	m3						
		Pillar up to plinth level	(	1	x	8	)	x	0.40	x	0.23	x	1.55	≈	1.14	m3						
		Plinth Beam all length	(	1	x	1	)	x	67.60	x	0.23	x	0.35	≈	5.44	m3						
		Septic tank wearing coat	(	1	x	1	)	x	6.00	x	0.90	x	0.08	≈	0.41	m3						
		Sock pit Slab	(	1	x	4	)	x	3.46	x	0.62	x	0.12	≈	1.03	m3						
		Total													11.29	m3						
		Net qnty													12.00	m3	x	Rs:	8484.905	/m3	≈	101818.86
7	OD	Laterate masonry with neatly dressed laterate stone of size 35X20X20cm or nearest size in cement mortar 1:6 for foundation and basement including all cost of materials, labour charges etc																				
		GF																				
		Wall all round	(	1	x	1	)	x	45.20	x	0.23	x	3.00	≈	31.19	m3						
		Inside wall	(	1	x	1	)	x	22.40	x	0.23	x	3.00	≈	15.46	m3						
		Wall	(	1	x	1	)	x	2.40	x	0.23	x	2.10	≈	1.16	m3						
		A single row on the plinth beam	(	1	x	1	)	x	67.60	x	0.23	x	0.15	≈	2.33	m3						
		FF																				
		Wall all round	(	1	x	1	)	x	45.20	x	0.23	x	3.00	≈	31.19	m3						
		Inside wall	(	1	x	1	)	x	5.60	x	0.23	x	3.00	≈	3.86	m3						
		Total													85.19	m3						
		Deduction																				
		wall stair	(	1	x	1	)	x	2.40	x	0.23	x	3.00	≈	1.66	m3						
		Wall at pillar portions	(	1	x	16	)	x	0.40	x	0.23	x	3.10	≈	4.56	m3						
		R shutter 300x255	(	1	x	5	)	x	3.00	x	0.23	x	2.55	≈	8.80	m3						
		Ventilation 60 x 50 cm	(	1	x	1	)	x	0.60	x	0.23	x	0.50	≈	0.07	m3						
		windows 150x150 cm	(	1	x	8	)	x	1.50	x	0.23	x	1.50	≈	4.14	m3						
		Bath room Opening 80 x 210 cm	(	1	x	1	)	x	0.80	x	0.23	x	2.10	≈	0.39	m3						
															19.61							
		total													65.58							
		Total													70.00	m3	x	Rs:	**4254.53**	/m3	≈	297817.10
8	9.1	Providing wood work (Anjili wood) in frames of doors, windows ,clerestory windows and other frames ,wrought framed and fixed in position																				

		with hold fast lugs or with dash fastners of required dia& length (hold fast lugs or dash fastner shall be paid for separately) D																					
		Ventilation 60 x 50 cm HM	(	2	x	1	)	x	0.60	x	0.10	x	0.07	≈	0.01	m3							
		Ventilation 60 x 50 cm VM	(	2	x	1	)	x	0.50	x	0.10	x	0.07	≈	0.01	m3							
		windows 150x150cm HM	(	2	x	8	)	x	0.60	x	0.10	x	0.07	≈	0.07	m3							
		windows 150x150cm VM	(	4	x	8	)	x	0.50	x	0.10	x	0.07	≈	0.11	m3							
		Total													0.20	m3	x	Rs:	88689.30	/m3	≈	17737.86	
9	10.6.1	Supplying and fixing rolling shutters of approved make, made of required size M.S. laths, interlocked together through their entire length and jointedtogether at the end by end locks, mounted on specially designed pipe shaft with brackets, side guides and arrangements for inside and outside locking with push and pull operation complete, including the cost of providing and fixing necessary 27.5 cm long wire springs manufactured from high tensile steel wire of adequate strength conforming to IS: 4454 - 1 and M.S. top cover of required thickness for rolling shutters 80x1.25 mm M.S. laths with 1.25 mm thick top cover.																					
			(	1	x	5	)	x	3.00	x	3.00			≈	45.00	m2	x	Rs:	2917.33	/m2	≈	131279.67	
10	5.8	Reinforced cement concrete work in vertical and horizontal fins individually or forming box louvers, facials and eaves boards up to floor five level, excluding the cost of centering, shuttering, finishing and reinforcement with 1:1½:3 (1 cement : 1½ coarse sand : 3 graded stone aggregate 20mm nominal size).																					
		GF																					
		Shade	(	1	x	1	)	x	15.60	x	0.60	x	0.07	≈	0.66	m3							
		Pillar	(	1	x	8	)	x	0.40	x	0.23	x	3.00	≈	2.21	m3							
		Beam top	(	1	x	1	)	x	67.60	x	0.23	x	0.45	≈	7.00	m3							
		cantilever	(	1	x	6	)	x	1.00	x	0.23	x	0.45	≈	0.62	m3							
		lintel	(	1	x	1	)	x	2.40	x	0.23	x	0.18	≈	0.10	m3							
		FF																					
		Shade	(	1	x	1	)	x	15.60	x	0.60	x	0.07	≈	0.66	m3							
		Pillar	(	1	x	8	)	x	0.40	x	0.23	x	3.00	≈	2.21	m3							
		Beam top	(	1	x	1	)	x	50.80	x	0.23	x	0.45	≈	5.26	m3							
		cantilever	(	1	x	6	)	x	1.00	x	0.23	x	0.45	≈	0.62	m3							
		lintel	(	1	x	1	)	x	40.00	x	0.23	x	0.18	≈	1.66	m3							
		Stair case footting	(	1	x	1	)	x	1.50	x	0.45	x	0.45	≈	0.30	m3							
		Stair first flight(FF+GF)	(	2	x	1	)	x	3.72	x	1.50	x	0.12	≈	1.34	m3							
		Stair second flight(FF+GF)	(	2	x	1	)	x	1.49	x	1.50	x	0.12	≈	0.54	m3							
		Stair steps(GF+FF)	(	0.5	x	40	)	x	1.50	x	0.28	x	0.18	≈	1.51	m3							
		Stair landing	(	2	x	1	)	x	2.40	x	1.50	x	0.12	≈	0.86	m3							
		Messanin roof slab GF	(	1	x	1	)	x	16.60	x	7.66	x	0.12	≈	15.26	m3							
		FF roof slab	(	1	x	1	)	x	16.60	x	7.66	x	0.12	≈	15.26	m3							
		SF roof slab	(	1	x	1	)	x	3.46	x	6.00	x	0.12	≈	2.49	m3							
		total													56.05	m3							
		Deduction																					

		Stair room opening	(	2	x	1	)	x	14.40	m2		x	0.12	≈	3.46	m3						
		total deduction													3.46	m3						
															52.59							
		Net qnty													60.00	m3	x	Rs:	9749.2	/m3	≈	584952.00
11	5.22.6	Steel reinforcement for R.C.C. work including straightening, cutting, bending, placing in position and binding all complete upto plinth level.																				
		12.00	m	3	x	120			kg/m3						1440.00	kg	x	Rs:	92.74539	/kg	≈	133553.36
12	5.22A.6	Steel reinforcement for R.C.C. work including straightening, cutting, bending, placing in position and binding all complete above plinth level. Thermo mechanically treated bars																				
		60.00	m	3	x	100			kg/m3						6000.00	kg	x	Rs:	92.74539	/kg	≈	556472.34
13A	5.9.1	Centering and shuttering including strutting, propping etc. and removal of form for : Foundations, footings, bases of columns, etc. for mass concrete.																				
		Pillar foottings	(	4	x	8	)	x	1.20			x	0.20	≈	7.68	m2						
		Pillar foottings	(	4	x	8	)	x	0.90			x	0.15	≈	4.32	m2						
															12.00							
															25.00	m2	x	Rs:	267.55	/m2	≈	6688.69
13B	5.9.5	Centering and shuttering including strutting, propping etc. and removal of form for : Lintels, beams, plinth beams, girders, bressumers and cantilevers.																				
		Plinth Beam all length	(	1	x	2	)	x	67.60			x	0.35	≈	47.32	m2						
		Beam top side(GF+FF)	(	2	x	1	)	x	118.40			x	0.45	≈	106.56	m2						
		cantilever(GF+FF)	(	3	x	12	)	x	1.00			x	0.45	≈	16.20	m2						
		lintel(GF+FF)	(	1	x	1	)	x	42.40			x	0.18	≈	7.63	m2						
															177.71							
															180.00	m2	x	Rs:	452.38	/m2	≈	81427.99
13C	5.9.6	Centering and shuttering including strutting, propping etc. and removal of form for : Columns, Pillars, Piers, Abutments, Posts and Struts.																				
		Pillar up to plinth level	(	1	x	8	)	x	1.26			x	1.55	≈	15.62	m2						
		Pillar	(	1	x	16	)	x	1.26			x	3.00	≈	60.48	m2						
															76.10							
															80.00	m2	x	Rs:	617.44	/m2	≈	49395.16
13D	5.9.3	Centering and shuttering including strutting, propping etc. and removal of form for : Suspended floors, roofs, landings, balconies and access platform.																				
		Sock pit Slab	(	2	x	4	)	x	3.46			x	0.12	≈	3.32	m2						
		Sock pit Slab	(	2	x	4	)	x	0.62			x	0.12	≈	0.60	m2						
		Stair landing	(	1	x	1	)	x	2.40	x	1.20			≈	2.88	m2						
		Messanin roof slab	(	1	x	1	)	x	16.20	x	7.66				124.09	m2						
		FF Roof slab	(	1	x	1	)	x	16.20	x	7.66			≈	124.09	m2						
		SF Roof slab	(	1	x	1	)	x	3.46	x	6.00			≈	20.76	m2						
		total													254.98	m2						
		Deduction																				

		Stair room opening	(	1	x	1	)	x	14.40	x	1.00			≈	14.40	m2							
															14.40	m2							
															240.58	m2							
															250.00	m2	x	Rs:	547.00	/m2	≈	136750.80
13E	5.9.7	Centering and shuttering including strutting, propping etc. and removal of form for : Stairs, (excluding landings) except spiral-staircases.																					
		Stair first flight(FF+GF)	(	1	x	2	)	x	3.72	x	1.50			≈	11.16	m2							
		Stair second flight(FF+GF)	(	1	x	2	)	x	1.49	x	1.50			≈	4.47	m2							
		Stair steps(GF+FF)	(	1	x	40	)	x	1.50			x	0.18	≈	10.80	m2							
															26.43	m2							
															30.00	m2	x	Rs:	538.83	/m2	≈	16165.03
13F	5.9.19	Centering and shuttering including strutting, propping etc. and removal of form for : Weather shade, Chajjas, corbels etc., including edges.																					
		Shade	(	1	x	2	)	x	15.60	x	0.60			≈	20.00	m2	x	Rs:	670.53	/m2	≈	13410.57
14	9.48	Providing and fixing M.S. grills of required pattern in frames of windows etc. with M.S. flats, square or round bars etc. including priming coat with approved steel primer all complete.																					
		Horizontal rod 12 mm dia																					
		Window 150 x 150 cm : HM 12mm road	(	14	x	8	)	x	1.50	x	0.888	kg	/m	≈	149.18	kg							
		Ventilation 60 x 50 cm HM 12mm road	(	4	x	1	)	x	0.60	x	0.888	kg	/m	≈	2.13	kg							
		MS Flat 25mm x 6mm																					
		Window 150 x 150 cm 6 Nos:	(	18	x	8	)	x	1.50	x	1.200	kg	/m	≈	259.20	kg							
		Ventilation 60 x 50 cm	(	8	x	1	)	x	0.50	x	1.200	kg	/m	≈	4.80	kg							
															415.32								
															420.00	kg	x	Rs:	160.66	/kg	≈	67477.79
15	10.26.1	Providing and fixing hand rail of approved size by welding etc. to steel ladder railing, balcony railing, staircase railing and similar works, including applying priming coat of approved steel primer M.S. tube.																					
															1000.00	kg	x	Rs:	142.59	/kg	≈	142590.93
16		Providing and fixing panelled or panelled and glazed shutters for doors, windows and clerestory windows, including ISI marked M.S. pressed butt hinges bright finished of required size with necessary screws, excluding panelling which will be paid for separately, all complete as per direction of Engineer-in-charge. 30 mm thick shutter																					
		windows 150X150 cm	(	1	x	8	)	x	1.40			x	1.40	≈	15.68	m2							
		Ventilation 60 x 50 cm 1Nos:	(	1	x	1	)	x	0.50			x	0.40	≈	0.20	m2							
		total													16.00	m2	x	Rs:	3277.13997	/m2	≈	52434.24

17	9.117.2	Providing and fixing factory made u PVC door frame made of uPVC extruded sections having an overall dimension as below (tolerance ±1mm), with wall thickness 2.0 mm (± 0.2 mm), corners of the door frame to be Jointed with galvanized brackets and stainless steel screws, joints mitred and plastic welded. The hinge side vertical of the frame reinforced by galvanized M.S. tube of size 19 X 19 mm and 1 mm wall thickness and 3nos Stainless steel hinges fixed to the frame complete Extruded section profile size 42x50 mm DAR 9.117.2																					
		Door 080 x 200 cm 1 Nos: HM	(	1	x	1	)		0.80					≈	0.80	m							
		Door 080 x 200 cm 1Nos: VM	(	1	x	2	)		2.00					≈	4.00	m							
															4.80								
		Total													5.00	m	x	Rs:	275.31	/m	≈	1376.53	
18	9.118.1	24 mm thick factory made PVC door shutters made of styles and rails of a uPVC hollow section of size 59x24 mm and wall thickness 2 mm (± 0.2 mm) with inbuilt edging on both sides. The styles and rails mitred and joint at the corners by means of M.S. galvanised/plastic brackets of size 75x220 mm having wall thickness 1.0 mm and stainless steel screws. The styles of the shutter reinforced by inserting galvanised M.S. tube of size 20x20 mm and 1 mm (± 0.1 mm) wall thickness. The lock rail made up of 'H' section, a uPVC hollow section of size 100x24 mm and 2 mm (± 0.2 mm) wall thickness, fixed to the shutter styles by means of plastic/galvanised M.S. 'U' cleats. The shutter frame filled with a uPVC multi-chambered single panel of size not less than 620 mm, having over all thickness of 20 mm and 1 mm (± 0.1 mm) wall thickness. The panels filled vertically and tie bar at two places by inserting horizontally 6 mm galvanised M.S. rod and fastened with nuts and washers (For W.C. and bathroom door shutter).DAR 9.118.1																					
		Details of cost for one door shutter 2.20x1.08m = 2.38 sqm	(	1	x	1	)	x	0.80	x			2.00	≈	2.00	m2	x	Rs:	3702.49	/m2	≈	7404.97	
19	13.16	6 mm thick cement plaster of c m 1:3 one coat floated hard and trowelled smooth for under side of slabs including watering curing etc. complete.under side of floor DAR 13.16																					
		GF																					
		Shade	(	1	x	1	)	x	15.60	x	0.60	x		≈	9.36	m2							
		Pillar	(	1	x	8	)	x	0.40	x		x	3.00	≈	9.60	m2							
		Beam top	(	1	x	1	)	x	0.00	x		x	0.45	≈	0.00	m2							
		cantilever	(	1	x	6	)	x	1.00	x		x	0.45	≈	2.70	m2							
		lintel	(	1	x	1	)	x	2.40	x		x	0.18	≈	0.43	m2							
		FF																					
		Shade	(	1	x	1	)	x	15.60	x	0.60	x		≈	9.36	m2							
		Pillar	(	1	x	8	)	x	0.40	x		x	3.00	≈	9.60	m2							
		Beam top	(	1	x	1	)	x	1.50	x		x	0.45	≈	0.68	m2							
		cantilever	(	1	x	6	)	x	1.00	x		x	0.45	≈	2.70	m2							
		lintel	(	1	x	1	)	x	40.00	x		x	0.18	≈	7.20	m2							
		Stair first flight(FF+GF)	(	2	x	1	)	x	3.72	x	1.50	x		≈	11.16	m2							
		Stair second flight(FF+GF)	(	2	x	1	)	x	1.49	x	1.50	x		≈	4.47	m2							
		Stair steps(GF+FF)	(	0.5	x	40	)	x	1.50	x		x	0.18	≈	5.40	m2							
		Stair landing	(	2	x	1	)	x	2.40	x	1.50	x		≈	7.20	m2							
		Messanin roof slab GF	(	1	x	1	)	x	16.60	x	7.66	x		≈	127.16	m2							
		FF roof slab	(	1	x	1	)	x	16.60	x	7.66	x		≈	127.16	m2							
		SF roof slab	(	1	x	1	)	x	3.46	x	6.00	x		≈	20.76	m2							

		total													334.17	m2						
		Deduction																				
		Stair room opening	(	1	x	1	)	x	14.40	x	1.00			≈	14.40	m2						
															14.40	m2						
															319.77	m2						
		Net qnty													325.00	m2	x	Rs:	183.47	/m2	≈	59629.27
20	13.7.1	12 mm cement plaster finished with a floating coat of neat cement floated hard and trowelled smooth ,including watering curing etc. complete.DAR 13.7.1 Top side of Roof																				
		Shade all round	(	1	x	2	)	x	15.60	x	0.60			≈	18.72	m2						
		Roof slab	(	1	x	1	)	x	16.60	x	7.66			≈	127.16	m2						
			(	1	x	1	)	x	3.46	x	6.00			≈	20.76							
		varanda	(	1	x	1	)	x	16.00					≈	16.00							
		total													182.64	m2						
		Deduction																				
		Stair room opening	(	1	x	1	)	x	14.40					≈	14.40	m2						
															14.40	m2						
															168.24							
		Net qnty													170.00	m2	x	Rs:	295.74	/m2	≈	50275.34
21	13.4	Plastering with 1:4,12 mmthick one coat floated hard and troweled smooth for walls inside & out side watering curing etc.complete.DAR 13.4																				
		GF																				
		Wall all round	(	1	x	1	)	x	45.20	x		x	3.00	≈	135.60	m2						
		Inside wall	(	1	x	1	)	x	22.40	x		x	3.00	≈	67.20	m2						
		Wall	(	1	x	1	)	x	2.40	x		x	2.10	≈	5.04	m2						
		A single row on the plinth beam	(	1	x	1	)	x	67.60	x		x	0.15	≈	10.14	m2						
		FF																				
		Wall all round	(	1	x	1	)	x	45.20	x		x	3.00	≈	135.60	m2						
		Inside wall	(	1	x	1	)	x	5.60	x		x	3.00	≈	16.80	m2						
		Total													370.38	m2						
		Deduction																				
		wall stair	(	1	x	1	)	x	2.40	x		x	3.00	≈	7.20	m2						
		Wall at pillar portions	(	1	x	16	)	x	0.40	x		x	3.10	≈	19.84	m2						
		R shutter 300x255	(	1	x	5	)	x	3.00	x		x	2.55	≈	38.25	m2						
		Ventilation 60 x 50 cm	(	1	x	1	)	x	0.60	x		x	0.50	≈	0.30	m2						
		windows 150x150 cm	(	1	x	8	)	x	1.50	x		x	1.50	≈	18.00	m2						
		Bath room Opening	(	1	x	1	)	x	0.80	x		x	2.10	≈	1.68	m2						

		80 x 210 cm																				
															85.27							
															285.11							
		Net qnty													300.00	m2	x	Rs:	234.66	/m2	≈	70397.08
22	11.38	Providing and laying ceramic floor tiles of size 300x300 mm of first quality of approved make In all colours laid on 20 mm thick bed of cement mortar 1:4 including pointing the joints with white cement and matching pigment etc. complete. DAR 11.38																				
		floor area	(	1	x	1	)	x	120.00	m2				≈	120.00	m2						
		Bath room floor	(	1	x	1	)	x	5.00	m2				≈	5.00	m2						
		steps	(	1	x	40	)	x	0.34	m2				≈	13.44	m2						
															138.44							
		floor total													140.00	m2	x	Rs:	1231.77	/m2	≈	172447.33
23	11.36	Providing and fixing Ist quality ceramic glazed wall tiles conforming to IS:15622 of approved make in all colours shades, risers of steps and dados over 12mm thick bed of cement mortar 1:3 and jointing with grey cement slurry at 3.3kg/m2 including pointing in white cment mixed with pigment of matching shade complete.																				
		Bath room floor	(	1	x	1	)	x	9.00	x			2.10	≈	18.90	m2						
															18.90							
		Bath room floor total													20.00	m2	x	Rs:	1139.43	/ m2		22788.62
24	13.48.1	Finishing with Deluxe Multi surface paint system for interiors and exteriors using Primer as per manufacturers specifications : Two or more coats applied on walls @ 1.25 ltr/10 sqm over and including one coat of special primer applied @ 0.75 ltr /10 sqm DAR 13.48.1																				
														≈	625.00	m2	x	Rs:	136.19	/m2	=	85118.75
25	13.48.2	Painting wood work with Deluxe Multi surface paint of required shade. : two or more coats applied @ 0.90 litr/10m2 over an under coat of primer applied @ 0.75 litr/10 m2 approved brand and manufacture																				
														≈	60.00	m2	x	Rs:	120.11958	/m2	=	7207.17
26	13.48.3	Painting Steel work with Deluxe Multi Surface Paint to give an even shade. Two or more coat applied @ 0.90 ltr/ 10 sqm over an under coat of primer applied @ 0.80 ltr/ 10 sqm of approved brand and manufacture												≈	250.00	m2	x	Rs:	122.57	/m2	=	30642.98
27	11.20	Chequerred precast cement concrete tiles 22 mm thick in footpath & courtyard, jointed with neat cement slurry mixed with pigment to match the shade of tiles, including rubbing and cleaning etc. complete, on 20 mm thick bed of cement mortar 1:4 (1 cement: 4 coarse sand).Medium shade pigment using 50% white cement 50% Grey cement													250.00	m2			1515.11375			378778.44
28	13.48.3	Provide and laying virtified floor tiles in different sizes (thickness to be specified by the manufacturer) with water absorption less than 0.08 % and conforming IS 15622, of approved make, in all colours and shades, laid on 20 mm thick cement mortar 1: 4 (1 cement :4 coarse sand), including grouting the joints with white cement and matching pigments etc. complete. size of tile 600X600 mm												≈	120.00	m2	x	Rs:	1914.763305	/m2	=	229771.60
		APPENDIX - B- WORKS ARRANGED FOR PLUMBING & SANITTARY FITTINGS																				
29	17.3.1	Providing and fixing white vitreous china pedestal type water closet (European type)with seat and lid ,10 litre white vitreous china flushing cistern & CP flush bend with fittings & brackets, 40 mm flush bend , over flow arrangement with specials of standard make and mosquito proof coupling of approved municipal design complete, including painting of fittings and brackets, cutting and making good the walls and floors wherever required:W.C. pan with ISI marked white solid plastic seat and lid																				
														≈	1.00	Nos	x	Rs:	6516.15	/E	=	6516.15
30	17.7.1	Providing and fixing wash basin with C.I brackets , 15 mmC.P brass pillartap ,32 mm C.P brass waste of standard pattern, including painting painting of fittings and brackets, cutting and making good the walls wherever required white vitreous china wash basin size 630X450 mm with a pair of 15 mm C.P brass pillar taps DAR 17.7.1																				
														≈	4.00	Nos	x	Rs:	3175.06	/E	=	12700.22
31	17.70.1	Providing and fixing PTMT Bottle Trap for Wash basin and sink.Bottle trap 31 mm single piece moulded with height of 270 mm, effective length of tail pipe 260 mm from the centre of the waste coupling, 77 mm breadth with 25 mm minimum water seal, weighing not less than 260 gms																				
														≈	4.00	Nos	x	Rs:	673.89	/E	=	2695.57
32	18.51.1	Providing and fixing C.P. brass long body bib cock of approved quality conforming to IS standards and weighing not less than 690 gms.15 mm nominal bore DAR 18.51.1																				

														≈	5.00	Nos	x	Rs:	831.65	/E	=	4158.23
33	17.72	Providing and fixing PTMT towel ring trapezoidal shape 215 mm long, 200 mm wide with minimum distances of 37 mm from wall face with concealed fittings arrangement of approved quality and colour, weighing not less than 88 gms.DAR 17.72																				
														≈	4.00	Nos	x	Rs:	297.58	/E	=	1190.31
34	18.64	Providing and fixing PTMT swivelling shower, 15 mm nominal bore, weighing not less than 40 gms. DAR 18.64																				
														≈	3.00	Nos	x	Rs:	193.05	/E	=	579.14
35	OD	Providing and fixing PVC pipes, fittings including fixing the pipe with clamps at 1.00 m spacing. This includes jointing of pipes & fittings with one step PVC solvent cement and testing of joints complete as per direction of Engineer-in-Charge 20mm dia 10Kgf/cm2- Internal work - Exposed on wall												≈	30.00	m	x	Rs:	157.14	/M	≈	4714.08
		20mm External work - Exposed on wall																				
36	OD	Providing and fixing PVC pipes, fittings including fixing the pipe with clamps at 1.00 m spacing. This includes jointing of pipes & fittings with one step PVC solvent cement and testing of joints complete as per direction of Engineer-in-Charge 20mm dia 10Kgf/cm2- Internal work - Exposed on wall												≈	20.00	m	x	Rs:	161.66	/M	≈	3233.19
		20mm External work - unfer trench																				
37	OD	Providing and fixing PVC pipes including jointing of pipes with one step PVC solvent cement ,trenching, refilling & testing of joints complete as per direction of Engineer in Charge. 20 mm dia 10Kgf/cm2												≈	20.00	m	x	Rs:	117.30		≈	2346.01
		25mm Internal work - Exposed on wall																				
38	OD	Providing and fixing PVC pipes, fittings including fixing the pipe with clamps at 1.00 m spacing. This includes jointing of pipes & fittings with one step PVC solvent cement and testing of joints complete as per direction of Engineer-in-Charge 25mm dia 10Kgf/cm2- Internal work - Exposed on wall												≈	15.00	m	x	Rs:	175.72	/M	≈	2635.75
		25mm External work - Exposed on wall																				
39	OD	Providing and fixing PVC pipes, fittings including fixing the pipe with clamps at 1.00 m spacing. This includes jointing of pipes & fittings with one step PVC solvent cement and testing of joints complete as per direction of Engineer-in-Charge 25mm dia 10Kgf/cm2- External work - Exposed on wall												≈	15.00	m	x	Rs:	183.39		≈	2750.86
		25mm External work - unfer trench																				
40	OD	Providing and fixing PVC pipes including jointing of pipes with one step PVC solvent cement ,trenching, refilling & testing of joints complete as per direction of Engineer in Charge. 25 mm dia 10Kgf/cm2												≈	15.00	m	x	Rs:	146.95		≈	2204.22
		32mm Internal work - Exposed on wall																				
41	OD	Providing and fixing PVC pipes, fittings including fixing the pipe with clamps at 1.00 m spacing. This includes jointing of pipes & fittings with one step PVC solvent cement and testing of joints complete as per direction of Engineer-in-Charge 32mm dia 10Kgf/cm2 - Internal work - Exposed on wall												≈	15.00	m	x	Rs:	213.42	/M	≈	3201.32
		32mm External work - Exposed on wall																				
42	OD	Providing and fixing PVC pipes, fittings including fixing the pipe with clamps at 1.00 m spacing. This includes jointing of pipes & fittings with one step PVC solvent cement and testing of joints complete as per direction of Engineer-in-Charge 32mm dia 10Kgf/cm2 - External work - Exposed on wall												≈	20.00	m	x	Rs:	221.85		≈	4437.04
		32mm External work - unfer trench																				
43	OD	Providing and fixing PVC pipes including jointing of pipes with one step PVC solvent cement ,trenching, refilling & testing of joints complete as per direction of Engineer in Charge. 32 mm dia 10Kgf/cm2												≈	30.00	m	x	Rs:	168.24		≈	5047.19

		40mm Externalwork - Exposed on wall																				
44	OD	Providing and fixing PVC pipes, fittings including fixing the pipe with clamps at 1.00 m spacing. This includes jointing of pipes & fittings with one step PVC solvent cement and testing of joints complete as per direction of Engineer-in-Charge 40mm dia 10Kgf/cm2-Internal work - Exposed on wall											≈	15.00	m	x	Rs:	282.65		≈	4239.78
		63mm External work - Exposed on wall																				
45	OD	Providing and fixing PVC pipes including fixing the pipe with clamps/ clips at 1.00 m spacing. This includes jointing of pipes with one step PVC solvent cement and testing of joints complete as per direction of Engineer-in-Charge 63mm dia 6Kgf/cm2 -External work - Exposed on wall											≈	15.00	m	x	Rs:	211.61		≈	3174.12
		110mm Internal work - Exposed on wall																				
46	OD	Providing and fixing PVC pipes including fixing the pipe with clamps/ clips at 1.00 m spacing. This includes jointing of pipes with one step PVC solvent cement and testing of joints complete as per direction of Engineer-in-Charge 110mm dia 6Kgf/cm2 -External work - Exposed on wall											≈	15.00	m	x	Rs:	317.79		≈	4766.79
		110mm External work - unfer trench																				
47	OD	Providing and fixing PVC pipes including jointing of pipes with one step PVC solvent cement ,trenching, refilling & testing of joints complete as per direction of Engineer in Charge. 110 mm dia 6Kgf/cm2											≈	20.00	m	x	Rs:	417.43		≈	8348.61
48	OD	Providing and fixing PVC moulded fittings / accessories for Rigid PVC pipes, including jointing with PVC solvent cement - 63 mm dia Vent cowl											≈	5.00	No:	x	Rs:	68.76		≈	343.82
49	OD	Providing and fixing PVC moulded fittings / accessories for Rigid PVC pipes, including jointing with PVC solvent cement - 110 mm dia Elbow											≈	5.00	No:	x	Rs:	188.80		≈	944.01
50	OD	Providing and fixing PVC moulded fittings / accessories for Rigid PVC pipes, including jointing with PVC solvent cement - 110 mm dia Bend											≈	5.00	No:	x	Rs:	177.17		≈	885.83
51	OD	Providing and fixing PVC moulded fittings / accessories for Rigid PVC pipes, including jointing with PVC solvent cement - 110 x 110 x 110 mm dia Door Tee											≈	5.00	No:	x	Rs:	257.97		≈	1289.84
52	OD	Providing and fixing PVC moulded fittings / accessories for Rigid PVC pipes, including jointing with PVC solvent cement - 110 x 75 mm dia Reducer											≈	5.00	No:	x	Rs:	97.62		≈	488.08
53	OD	Providing and fixing PVC moulded fittings / accessories for Rigid PVC pipes, including jointing with PVC solvent cement - 75 x 63 mm dia Reducer											≈	5.00	No:	x	Rs:	62.79		≈	313.95
54	18.48	Providing and placing on terrace (at all floor levels) polyethylene water storage tank ISI 12701 marked, with cover and suitable locking arrangement and making necessary holes for inlet, outlet and overflow pipes but without fittings and the base support for tank											≈	1000.00	ltr	x	Rs:	9.87	/ltr	=	9870.06
55	18.19.1.1	Providing and fixing gun metal non-return valve of approved quality (screwed end) : 25 mm nominal bore : Horizontal DAR 18.19.1.1											≈	3.00	Nos	x	Rs:	560.08	/Nos	=	1680.24
56	18.19.1.1	Providing and fixing gun metal non-return valve of approved quality (screwed end) : 32 mm nominal bore : Horizontal DAR 18.19.1.1											≈	3.00	Nos	x	Rs:	560.08	/Nos	=	1680.24
57		BIO GAS PLANT												LS							175000.00
58		Solid waste management												LS							100000.00
59		Rain water harvesting tank												LS							175000.00
60		Solar pannel installation												LS							400000.00
		TOTAL																			4693819.10
		Add ELECTRIFICATION CHARGES 10%																			466180.90
		GRAND TOTAL																			**5160000.00**
RUPEES FIFTY ONE LAKHS SIXTY THOUSAND ONLY																						

Chapter 3

FINANCIAL DETAILS

Component wise details for each activity

Materials: Since it is proposed to be a work by a recognized contractor, the material will be supplied by the contractor as per the specification in the tender notification. The cost of the materials is included in the estimate. And it is included in the special provisions and may be made to assure the quality of all the material used.

Labour: The labour charge is included in the estimate. Since it is proposed to be a work by a recognized contractor, the labour will be employed by the contractor as per the pacification in the tender notification. Special provisions may be made to assure the quality of workmanship.

Transport: The transporting charge is included in the estimate. While transporting the materials, all necessary care will be taken to avoid casualty

Environmental compliance: All environmental laws, regulations, standards and other requirements (site permit, fire clearance certificate and pollution certificate) will be obtained. Environmental concerns and compliance activities are increasingly being integrated and aligned to some extent in order to avoid conflicts, wasteful overlaps and gaps.

Consultancy: No major consultancy is envisaged.

Stationary compliance cost: Detailed costing is included

Procurement: Procurement charge is envisaged

Soil Testing: Provision is included

Contingency: Contingency charges are included

Financing Source: Fund from Kerala Local Government Service Delivery Project (KLGSDP)

Chapter 4

INSTITUTIONAL FRAMEWORK

ROLE OF DIFFERENT OFFICIALS:

Panchayat Committee: The project has to approve by the Panchayat Committee

Assistant Director of Agriculture and Engineer from the LSGD Engineering Wing: After the approval, it will be vetted by the Assistant Director of Agriculture and Engineer from the LSGD engineering wing

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Panchayat Committee: Panchayat Committee officially submits the project to the District Planning Committee (DPC) for approval.

Procurement / Tender: After the approval of the DPC, the Panchayat has to tender the work as per the procumbent /tender rule

Implementation: The project will be implemented by the LSGD engineering wing of the Gram Panchayat.

Monitoring: the Project will be monitored by the Panchayat Committee.

Beyond Panchayat: No activity is visualized beyond the Panchayat during the stage of construction.

Chapter 5

PROJECT MANAGEMENT

PRE CONSTRUCTION PHASE

The pre-construction phase may be the most important part of any commercial construction project, because this is the phase where crucial decisions are made, and changed. At this point, you can change your mind and make revisions much more easily than you could at later stages in your project. The decisions that you make during the pre-construction phase of your project will determine many of the important aspects of the project's overall plan. Usually, this part of the project will serve to determine the rest of your project's objectives, time frames, costs, procedures, and more, such as logistical issues and conceptual preparations. The scope of this process will vary by project and it will typically depend on a number of variables such as time and budget. However, there are some elements that are germane to every project. You can expect to encounter these during the pre-construction phase of any project that you undertake.

The overall planning, coordination, and control of the project from inception to completion aimed at satisfying the requirements of the Panchayat are listed in the project management phase in order to produce a functionally and financially viable project. It resulted in a package of plans and specifications which formed the construction documents. The Panchayat would then tender the bids (or tenders) and award the project to a successful bidder, who would then build the structures for agri- business center authority and the solid & liquid waste management. Pre-construction services grew out of construction cost estimating to encompass the other activities in planning a project. The intent is to work with the Panchayat to help deliver a satisfactory project that meets the objectives of the proposed project. In addition to estimating, the pre construction team participates in design decisions, evaluations, value engineering, value analysis, scheduling, constructability reviews, and more. Design costs and permitting are included. Many items under pre-construction services are included in the project construction

services. This is also accomplished in the project cost. The constructing firm then delivers the project as per the proposed tender agreement. The Panchayat and the constructing firm share any cost savings realized during construction. Before implementation a wide range of issues needs to be considered. · The availability of finance for construction is important. As in case of the proposed project, it is assured from the KLGSDP. Preparation of tender/bid documents; and· choice of an appropriate type of construction contract is another landmark.

PHASING OF DEVELOPMENT

Phasing out of targets for the entire construction work of the proposed is the important step under the pre construction phase. The programme has incorporated practical time-frames for the construction contract lengths and the periods required for the pre-contract stages. Sufficient time is allowed for examination of detailed design, the preparation of tender documents, tendering and tender analysis, recommendations and acceptance; and the contractor's mobilization. Other matters requiring careful consideration are also included into the separate construction contracts and scheduling of equipment procurement. In order to accelerate implementation some activities are designed in such a way that it can be initiated before the real start of a project. The pre-qualification, selection of design, supervision of consultants, the preparation of tender documents are included in the initial actions .

Quality assurance and quality control are integral components of a Quality Assurance Project Plan. In addition, there are four key elements of a QAPP: project management, measurement/data acquisition, assessment and oversight, and data validation and usability. The elements of project management include documenting the process used to identify the problem and collecting background information; establishing task descriptions, timelines, and quality objectives; creating staff organization charts and responsibilities, including training and certification requirements; and keeping necessary documentation of the project. These elements ensure the project has a well-defined goal

and approach understood by the participants, and that the planning outputs have been documented.

CONTRACT ADMINISTRATION SYSTEM

A responsible person, who belongs to the LSGD engineering wing from the Panchayat, would normally be appointed to oversee the works. Apart from day-to-day supervision of the project, it is his / her responsibilities to cover the preparation of the tender (or "bid") documents, including working details, tender drawings, specifications and bills of quantities, an overall cost plan and procurement schedules for obtaining equipment.

CONTRACT ADMINISTRATION ISSUES

Before initiating construction operations, a number of issues related to construction supervision and monitoring procedures have to be resolved, that is on· the responsibility for setting out the works the authority for giving instructions on the site ,the scope of any materials-testing programme ,· the date for completion of the work and the date for occupation. It is better to settle these issues by the Panchayat with the contractor.

FINANCIAL MANAGEMENT

The timely administration and financial management of payments to contractors is the responsibility of the Panchayat, who will undertake valuations of the work completed and then prepare a certificate showing the amount for interim payment. An amount of around 5-10 percent is normally retained from the valuations to cover the making good of defects.

On completion of the works the LSGD Engineering Wing is entitled to prepare a final account, which will form the basis of the final payment, including the release of the retention amount With a contract based on measured quantities (rather than a fixed price) the final account will adjust the tender sum amount to correspond to the actual works completed.

LOCAL CONTRACTING CAPACITY

To achieve the desired phasing the construction works will need to be broken up or packaged so that they can be handled by the local construction industry. The abilities of local contractors will, therefore, need to be reviewed. We have a system of licensing of contractors. In order to be registered they have to satisfy a range of minimum requirements. These criteria are related to the technical personnel they employ, the construction equipment they possess, their experience in terms of projects completed and their financial assets. Normally, contractors are graded into classes and what needs to be considered is the suitability of particular grades for different sections of the work as per the proposed project.

SELECTION AND PRE-QUALIFICATION OF CONTRACTORS

Generally, bidding should be on a selective tendering basis, taking into account the need for the contractors to have experience in both the installation of site infrastructure and of fairly sophisticated buildings. The proposed project requires experience in high-quality building construction and therefore a general civil engineering contractor, with relevant good will and experience, would be appropriate. This might be best achieved by letting this section of the works as a separate contract. Since the design of the buildings is made sufficiently robust and simple, the proposed project activity might be undertaken by a smaller-scale contractor.

CONTRACT CONDITIONS

Conditions must be clear and it should be easily administered contractual arrangements**.** Local conditions of contract are likely to exist and these may be appropriate for proposed types of work. The contract should be on a measure and pay basis, tendered on the basis of bills of quantity, for which the local conditions are ideally suited.

NO AFFIRMATIVE ACTION PROGRAMMES.

Affirmative action programmes towards local construction industries should not be entertained so that standard and those who have good credibility can compete against locally patronaged contractors. These programmes will need to be taken into account both in selecting contractors and in the financial and economic analysis of the project. All cautions must be exercised in the tender review. The normal criteria used in evaluating tenders is to select the lowest "conforming" bid, which is the one that combines a low price matched to a proven ability to undertake the works.

An additional incentive to local contractors is often to allow a mobilization advance of say 10 percent of the contract value. If this is contemplated, it is essential that adequate provision is made in the contract documents for its proper utilization, so that the payments are only made against specific project activities, such as a percentage release on the arrival of the contractor's equipment and plant, with the balance released as the work progresses to the satisfaction of the resident engineer.

IMPLEMENTATION OF AGRICULTURAL MARKETING CENTER AUTHORITY OPERATIONS

Assuming that the institutional framework for the agricultural marketing centre authority has been resolved there are a number of other issues with which the agricultural marketing centre authority staff and traders will need to involve themselves in order that management aspects of the implementation programme are effective.

Operational Matters. These include issues such as staff selection and training. Many of the disciplines and skills required will be relatively novel and it will therefore be necessary for a training programme to be developed appropriate to these needs. The selection of applicants for stalls and storage space, and the setting of rents and tolls will also need to be resolved

Post-Contract Administration. On completion of the construction works the agricultural marketing centre authority will take over responsibility for looking after the physical

infrastructure. An agri- business center authority operator is, in effect, the manager of a major infrastructure system. To do this, the agri- business center will have to consider how the periodic operation and maintenance of the agri- business center will be undertaken. Apart from day-to-day maintenance, which is likely to be the responsibility of "in-house" staff, this will include :(i) the setting of maintenance standards for the longer-term repair and replacement of infrastructure; (ii)the definition of emergency safety and security procedures;(iii)and obtaining public liability and accidental damage insurance.

Information Systems. The setting up of agricultural marketing centre authority information and price systems will need to be considered right from the outset so that the dissemination of information can commence with the operation of the agricultural marketing centre. A monitoring system will also need to be set up so that an agricultural marketing centre authority's performance can be evaluated against predetermined physical and economic criteria, particularly if lessons from a project are to be applied to other agri business center authority developments.

Project Completion. At the end of an implementation period the agricultural marketing centre authority should be fully operational, agricultural marketing centre authority information and management systems should be functioning and it should start to be clear whether the agri- business center authority will be able to achieve benefits for the main target groups of beneficiaries. However, the impact of an agricultural marketing centre project on its beneficiaries is likely to be difficult to measure, particularly in the short term of a project life.

Project Monitoring Criteria. The achievement of a project's goals will, therefore, need to be measured by the monitoring system. A number of indicators may be used to measure the project's impact. These might include:

- Remunerative price for the agriculture produce
- increased per caput consumption of fruits, vegetables, fish and meat in line with national basic-needs targets;

- expanded production areas for fruits vegetables and related increases in producer's incomes; and
- consumer friendly prices for fruits and vegetables, accompanied by a leveling-out of seasonal fluctuations in consumer prices.

To verify these indicators may need regular surveys to be undertaken by the agricultural marketing centre authority or by the responsible government departments. Surveys may include changes in price for agriculture produce, estimates of changes in production areas planted and yields, and consumer price monitoring. These data, combined with an analysis of the daily trading and receipts records maintained by the agricultural marketing centre authority, will indicate whether the operation of an agricultural marketing centre authority has been successful. The foundation of the monitoring system should be established during the implementation period by undertaking base-line surveys.

Commencement of activities

- Procurement Process (Tender Package, Package description.
- Tender Schedule – Contract, Consultant, firms)
- Schedule for Clearance (if any) Certificate, registration agreement.)

Chapter 6

FINANCIAL VIABILITY AND SUSTAINABILITY

ECONOMIC COST BENEFIT ANALYSIS (CBA):

It is examined to establish and totals up the equivalent money value of the benefits and cost to the community of the Panchayat by constructing the project. In other words, our analysis is to know whether the construction of the agricultural marketing centre is worthwhile in terms of economic rationality. In the exercise many components of the benefits and costs are intuitively obvious and therefore the basic principles are applied for the exercise. When the impact of the project is studied and computed, 'the particular area under construction' has contributed additional weightage .It is a positive amount for the particular project area, the Kumbadaje Panchayat. We have constructed two hypothetical illustrations by applying 'with and without' comparison and 'before and after' comparison. (i) What the situation would be with the project and what the situation would be without the Project. (ii) What the situation would be before the project and what the situation would be after the project. All the comparisons are positive and justified economic rationality of the project .The measurement of value of human wellbeing expected to be supported by the proposed project is also favourable though there is considerable reservations to the idea of placing money value on human wellbeing. When all this has been considered, the decision making for this project is one for which the discounted value of the benefit exceeds the discounted value of cost .The net benefits are positive ,this is equivalent to the benefit cost being greater than one and the internal rate of return being greater the cost of capital .

Social Cost Benefit Analysis

All the societal effects, like, pollution, environment, safety, travel times, spatial quality, health, market impacts, legal aspects, et c had been taken in consideration We have tried to attach a price to as many effects as possible in order to uniformly weigh the above-

mentioned heterogeneous effects. As a result, these prices reflect the value a society attaches to the caused effects. It has enabled us to form an opinion about the net social welfare effects of the project and set against the 'null alternative hypothesis'. We have identified direct, indirect and external effects of social cost benefit. Direct effects are the costs and benefits that can be directly linked to the users of the project properties (the local community in general and peasantry in particular) Indirect effects are the costs and benefits that are passed on to the producers and consumers outside the market with which the project is involved (a chain of another set of business group , nearby the new building, , recreational area such as hotels and restaurant , taxi stand , tax incomes, etc.). External effects are the costs and benefits that cannot be passed on to any existing markets because they relate to issues like the environment (noise, emission of CO2, generation of solid and liquid waste etc.). All relevant costs and benefits of the project is identified and monetized as far as possible. The general principle is that the benefits of a project do not always get to the groups bearing the costs. A social cost benefit analysis gives insight in who bears the costs and who derives the benefits. However, the above general principal is not the case with the construction of the project. Here as per our observation, who bears the costs of the project are those who derive the benefits. Our method of monetizing effects could also influence the outcome of the social cost benefit analysis and the predictions contained major elements of uncertainty. Therefore, we are fully conscious that the result of the social cost benefit analysis was not absolute. Nevertheless, it has acted a good instrument to investigate the strong and weak points of the different aspects of the project.

- The following Social benefits and costs were Identified

Social Benefits

1. The major benefit of setting up of an agricultural marketing centre would be the establishment of a market structure that will lead to creation of better price mechanism for agriculture produce. It will also lead to supply of fresh agriculture produce to customers at a reasonable price. The exploitation of the middle men would be minimized.

2. The benefit of setting up of a scientific structure for waste (solid & liquid) treatment and management along with the market structure would lead to reduction in waste disposal costs and environment coasts as agriculture residue can be used.

3. The total project beneficiary household s is the entire households in the Panchayat area and considerable size from the nearby Panchayats.

4. Revenue earned by the Panchayat in terms of professional tax and other taxes which will gradually strengthen the resource base of the deficit Panchayat.

The will provide the technical industry expertise, collaborative research and partnerships to help the regions' industry connect, compete and grow globally. With focus areas in emerging and novel crops, food business development, and precision agriculture, the Center will support the agriculture industry and enable companies to access high-growth opportunities for increased success.

Social Costs

No major social cost except the generation of solid and liquid waste is identified. Since the center is intended to be properly and structurally linked with the solid and liquid waste management unit the impact of the social cost is minimized to very little /zero.

Access:

- Since the proposed project is on agricultural marketing centre *the* access is ensured to all sections of the society. The peasantry would directly participate in the market with their agriculture produce and the other sections of the society participate as customers. The service of the Solid & Liquid Waste Management unit is accessible to all.

Coverage:

- Universal coverage is ensured. However, there may be preference for those who from the local community.

Service:

- The proposed project has two components, Center and Solid & liquid waste management .The first one provides a package of services such as rural market, remunerative price for local agriculture produce, supply of agriculture product

with reasonable price and employment opportunities. Whereas the services from the second component provides clean and zero waste environment space for social and civic engagement.

Safety:

- All safety measures including fire safety will be ensured in the in the center as per the existing building norms.

Time Saving:

- As time saving mechanism, a time scheduled(with set goals and deadlines on realistic terms) ,is included in the work plan and accord it strictly as possible **.**Application of protocol checklist for observations on how products and services are used and is recommended as ways to save time . Application of accounting software, project management platform, delegation, focus on result, incentivize tasks, set reminders, prioritize by importance, prioritize by urgency etc can be used judiciously and in the right context as time saving tips in project management The project steering committee will be constituted to avoid gaps in project planning, deficient contract management, and ineffective monitoring, which is mainly take the responsibility of time saving in the project.

Cost Saving:

All intense, precise, and detailed cost saving measures will be applied. Mainly, it will be achieved by competitive bidding process. Pre ender documents will be prepared in such a way to select and manage the best providers for the project in terms of service, quality and cost. It looks at how processes and procedures can be made more efficient, increasing productivity. Apply protocol checklist for Simple observations on how products and services are used and recommends ways to save money .Correction of billing errors will be made by double checking **.**Elimination of overcharges and/or unnecessary services is another way to reduce cost **.**Rate reductions from current providers will be made friendly negotiations. The project steering committee will be constituted to avoid gaps in project

planning, deficient contract management, and ineffective monitoring, which is mainly taking the responsibility of cost saving in the project.

Environmental Improvement:

An Environment Improvement Programme (EIP) is envisaged as a business and community engagement tool which will be constructed by the three stakeholders (Panchayat, business groups and the local community). It will be an effective tool to guide the proposed market's environmental management through a process of continued improvement. It is also a public commitment by the Panchayat to drive environmental improvements through a series of agreed actions and timelines. Environment Improvement Programme recognizes the valuable environmental improvements which can be made by stakeholder committed to the effective application of EIPs through responsible citizen engagement. A number of fundamental principles should be considered by the Panchayat, businesses group in the proposed market project and the local community. The EIP is developed in a partnership between the Panchayat, business group and the local community in which it operates. As such the Panchayat needs to be open, constructive and collaborative – the consortium of Panchayat, business group and local community will provide insight into areas of environment concern. When used both as an inspirational tool, and in a mandatory capacity between the Panchayat, business group and local community, have the legitimate power to regulate. The consortium looking to implement an EIP need to show genuine commitment to the process of environmental improvement, which is reflected in the issues identified for action plan, which should be endorsed at Panchayat level. The information in EIPs should be easily accessible to the community. The language and style of plans should be appropriately pitched for the audience. The document should also be available both to the local community members who attend the Gram Sabha and also in the public domain via (the Panchayat's website). The EIPs should be integrated into existing environmental policies. The nature of this will vary depending on the level of sophistication of environmental management in the Panchayat with standard protocol checklist. The issues

and actions identified within EIPs should be tailored to the specific business and the specific project site of both market and solid & liquid waste management structures/units. In particular, they should reflect those identified as of community concern and should address any relevant issues which characterize the particular business group. Activities and objectives within EIPs should be prioritized according to the need. The progress is monitored on a concurrent basis with a reporting system by an MIS template

Accountability

Accountability is the key element in project management. It outlines the different ways in which project activities are accountable and the mechanisms they use to account to the local communities. Since the process and end result aim to results-based management the proposed project activity should begin by introducing key features of governance and management structures in relation to the principle of accountability. The Panchayat also outlines principles for enhancing 'downward' or social accountability to project and programme beneficiaries. The organizational culture is designed in such ways which lead to accountability in project management and accountability in their dealings with all stakeholders. An accountability manual would be designed to give instructions on how to keep clear, accurate financial records in accordance with international best practice. It also suggested to operational double-entry book keeping and provides guidance on generating key financial statements including income & expenditure accounts and balance sheets for social auditing.

.**Negative Effects**

- No negative efforts are listed.

Chapter 7
MONITORING AND EVALUATION

While perceptions as to the role and function of M&E may vary, their place as key elements of the project cycle among development agencies is incontrovertible. The EC's Project Cycle Management Guidelines, for example, emphasize the use of M&E results for programming and project identification, as part of a structured process of feedback and institutional learning. IFAD places M&E at the heart of 'managing for impact', by which is meant the need to respond to changing circumstances and increased understanding, and managing adaptively so that the project is more likely to achieve its intended impacts8 . For the World Bank, monitoring and evaluation systems are designed "to inform project management of whether implementation is going as planned or corrective action is needed. A well-designed M&E system provides data on the progress of a project and whether it is meeting objectives. These data may indicate that adjustments are required in the project to take into account different circumstances in the local environment". . Although monitoring and evaluation are usually discussed in tandem, they serve distinct yet complementary functions. The role of monitoring is seen as one of regular and continuous tracking of inputs, outputs, outcomes, and impacts of development activities against targets. It determines whether adequate implementation progress has been made to achieve outcomes, and provides management with information to enhance implementation. Unlike monitoring, evaluation is seen as attempting to establish attribution and causality, and serve as a basis for accountability and learning by staff, management and clients. Information from evaluation is to be used to develop new directions, policies and procedures.

Maintenance, monitoring and evaluation should be considered a part of the asset management system. Asset management may be defined as minimizing the life cycle cost of managing deteriorating road facilities, including construction costs, while maintaining the level of service provided to road users with limited financial and human resources, maintaining the existing road assets in good condition and clearly explaining these

activities to the public. On completion of the center the Panchayat committee will take over responsibility for looking after the physical infrastructure. The responsibility of monitoring and evaluation would be attached to the Assistant Director of Agriculture and Engineer from the LSGD engineering Wing. The Gram Panchayat is in effect, the manager of a major rural infrastructure system. To do this, the Panchayat will have to consider how the periodic monitoring and maintenance of the market will be undertaken. At the end of an implementation period the market should be fully operational. However, the impact of the project on its beneficiaries is likely to be difficult to measure, particularly in the short term of a project life.

14000

Proforma C
E&S Clearance and Compliance Format for GPs

Village: Kumbadaje GP: Kumbadaje Taluk: Kasaragod District: Kasaragod
Title of Proposed Activity:
Proposed date of commencement of work: construction of Agricultural Marketing centre with facilities

1. Does any item in the Regulatory list apply to the proposed activity? ☐ Yes ☑ No
2. If yes, have necessary permissions been obtained? ☐ Yes ☐ No ☑ NA
3. Does any item in Level 1 of Control List apply? ☐ Yes ☑ No
4. Does any item in Level 2 of Control List apply? ☑ Yes ☐ No

MITIGATION PLAN

Environmental and Social Risks	Mitigation Measures to be adopted

Additional cost on account of mitigation measures added to overall project cost, if any:

Note: Use Environmental Mitigation Guidelines (Proforma E) in case of Level-1 activities or LESA report (Proforma F) in case of Level-2 activities to fill in the above section. Write N/A if answers to questions 2 and 3 are 'No'

KUMBADAJE GRAMA PANCHAYAT P.O.Kumbadaje Kasaragod

Filed by: Implementing Officer (Signature)
Working Group Chairman (Signature)

Assistant Engineer L S G D Section
Kumbdaje H Q / Bellur
Bellur Gramapanchayath

APPROVALS

☐ Cleared ☐ Not cleared. Chairperson, Monitoring Committee (Signature & Comments)

Fathimat Zuhara
President
Kumbdaje Grama Panchayat
Ph: 04998 260237

☐ Cleared ☐ Not cleared Block Level Officer in the next higher tier (Signature & Comments)

☐ Cleared ☐ Not cleared Chairperson DPC (Signature & Comments)

COMPLIANCE VERIFICATION

Verified that all mitigation measures proposed have been ☐ implemented / ☐ not implemented as per the mitigation plan mentioned above.

Additional comments, if any:

Signatures: GP Implementing Officer Chairman, Monitoring Committee Block Level Officer

Assistant Engineer L S G D Section
Kumbdaje H Q / Bellur
Bellur Gramapanchayath

പ്രൊഫോർമ-എഫ്

പാരിസ്ഥിതിക-സാമൂഹിക തിട്ടപ്പെടുത്തലിന്റെ രണ്ടാം ഘട്ട (Level 2) പ്രവർത്തനത്തിനുള്ള ഫോറം
(Limited Environmental and Social Assessment - LESA)

പ്രോജക്ടിന്റെ പേര് മലയാളത്തിൽ: ഇംഗ്ലീഷിൽ:	Construction of Agricultural Marketing centre with facilities.		
പ്രോജക്ട് കോഡ്			
മുനിസിപ്പാലിറ്റി /ഗ്രാമ പഞ്ചായത്ത്	പേര്: Kumbadaje	ജില്ല: Kasaragod	
പ്രോജക്ട് നടക്കുന്ന സ്ഥലം	സ്ഥലപ്പേര്: Kumbadaje	വാർഡ് നമ്പർ: 6 - XI	
മുടക്കുമുതലും കാലദൈർഘ്യവും	മുടക്കുമുതൽ 5200000 രൂപ	കാലദൈർഘ്യം.....മാസങ്ങൾ	

പദ്ധതി വിലയിരുത്തൽ

ലക്ഷ്യങ്ങൾ	ഘടകങ്ങൾ	ആവശ്യമായ സ്രോതസ്സുകൾ	സാങ്കേതിക വിദ്യ
Marketing centre	Steel, cement, Sand, metals	Marketing Centre	Building constructors of cpwd

പരിസ്ഥിതിയെ ബാധിക്കുന്ന പദ്ധതി പ്രവർത്തനങ്ങൾ	1. 2. NA	3. 4.
സ്വീകരിച്ചിട്ടുള്ള പരിഹാരമാർഗ്ഗങ്ങൾ	1. 2. NA	3. 4.

പരിസ്ഥിതിയെ ബാധിക്കുന്നത് സംബന്ധിച്ചുള്ള സംക്ഷിപ്ത വിവരം

(ബാധിക്കുന്നതിന് നേർക്ക് ശരി (√) അടയാളമിടുക) NA

1. *വായുവിനെ ബാധിക്കുന്നത്*	√	ഉദ്ദേശിക്കുന്ന പരിഹാരം	ചെലവ്
▪ അന്തരീക്ഷത്തിൽ പൊടിപടലം കലരും			
▪ പുകയും ആവിയും കലരും			
▪ വായുപ്രവേഗം കൊണ്ട് മണ്ണ് നഷ്ടപ്പെടും			
2. *വെള്ളത്തിനെ ബാധിക്കുന്നത്*			
▪ ജലാശയങ്ങളിൽ ചെളി വർദ്ധിക്കും			
▪ ജലദൗർലഭ്യമുണ്ടാകും			
▪ മണ്ണോ ഭൂമിയോ ഒലിച്ചുപോകും			
▪ ഭൂഗർഭജലം കുറഞ്ഞുപോകും			
▪ ഉപരിതല ജലാശയങ്ങളിൽ വെള്ളം കുറയും			
▪ ജലാശയത്തിലെ പുനഃസംഭരണശേഷി കുറയും			
▪ ജലാശയങ്ങളിൽ ഖര-ദ്രവമാലിന്യങ്ങൾ അടിയും			
3. *ഭൂമിയെ ബാധിക്കുന്നത്*			
▪ സ്ഥലമൊരുക്കുമ്പോൾ സ്ഥലത്തിന് രൂപമാറ്റം വരികയോ മണ്ണു നഷ്ടപ്പെടുകയോ ചെയ്യും			
▪ നിലവിലുള്ള സേവനങ്ങൾക്ക് തടസ്സം നേരിടും			
▪ സ്വാഭാവിക നീർച്ചാലുകൾ തടസ്സപ്പെടും			
▪ നിലവിലുള്ള ഓടകളും വെള്ളത്തിന്റെ ഒഴുക്കും തടസ്സപ്പെടും			
▪ തുറസ്സായ സ്ഥലങ്ങളിൽ മാലിന്യവും ചപ്പുചവറുകളും നിക്ഷേപിക്കപ്പെടും			
▪ ഖര-ദ്രവ മാലിന്യങ്ങൾ പുറന്തള്ളപ്പെടും			
▪ തുറസ്സായ സ്ഥലം നഷ്ടപ്പെടും			
▪ മേൽ മണ്ണ് നഷ്ടപ്പെടുകയും മണ്ണിന്റെ ഗുണമേന്മ കുറയുകയും ചെയ്യും			
4. *പൊതുജനാരോഗ്യത്തേയും സുരക്ഷിതത്വത്തേയും ബാധിക്കുന്നത്*			
▪ ഗാർഹിക മാലിന്യങ്ങൾ കൂമിഞ്ഞുകൂടും			
▪ ജൈവ-ഔഷധ മാലിന്യങ്ങൾ കൂമിഞ്ഞു കൂടും			
▪ പൊതു ടോയ്ലറ്റുകൾ പരിപാലിക്കുന്നതിൽ അപര്യാപ്തതയുണ്ടാകും			
▪ അപകടങ്ങൾക്കും ആപത്തുകൾക്കും സാധ്യതയുണ്ടാകും			
▪ അണുബാധമൂലം അസുഖങ്ങളുണ്ടാകും			

▪ പകർച്ചവ്യാധികളുണ്ടാകും		
▪ സുരക്ഷാ സംവിധാനങ്ങളുടെ അപര്യാപ്തതയോ ഇല്ലായ്മയോ കൊണ്ട് അപകടമുണ്ടാകും		
▪ അപായകരമായ വാതകങ്ങൾ പുറന്തള്ളപ്പെടും		
5. *ജൈവവൈവിധ്യത്തെ ബാധിക്കുന്നത്*		
▪ മരങ്ങൾ വെട്ടേണ്ടിവരും		
▪ വംശനാശം നേരിടുന്നതോ തദ്ദേശീയമായതോ ആയ സസ്യ-ജന്തുജാതിക്ക് ഭീഷണിയുണ്ടാകും		
▪ ദേശാടനപ്പക്ഷികളുടെ പാതയ്ക്ക് തടസ്സമുണ്ടാകും		
▪ വന്യമൃഗങ്ങളുടെ സ്വാഭാവിക സഞ്ചാരപാതയ്ക്ക് തടസ്സമുണ്ടാകും		
▪ മറ്റു സസ്യങ്ങളുടെയോ ജന്തുജാതികളുടെയോ അധിനിവേശമുണ്ടാകും		
▪ കീടാണുക്കളുടെയോ കീടനിയന്ത്രണത്തിന്റെയോ ഭീഷണിയുണ്ടാകും		
6. *സമൂഹത്തേയും സമുദായങ്ങളേയും ബാധിക്കുന്നത്*		
▪ വീടുകൾക്കോ ആശുപത്രികൾക്കോ ഉയർന്ന ശബ്ദം കൊണ്ടുള്ള ശല്യമുണ്ടാകും		
▪ വിഭവ സ്രോതസ്സുകളുടെ ഉപയോഗത്തിന്റെ കാര്യത്തിൽ അഭിപ്രായഭിന്നതയുണ്ടാകും		
▪ തദ്ദേശവാസികളെയോ ദുർബല വിഭാഗങ്ങളെയോ മാറ്റി പാർപ്പിക്കേണ്ടി വരും		
7. *മുകളിൽ സൂചിപ്പിച്ചവയിൽ ഉൾപ്പെടാത്ത മറ്റെന്തെങ്കിലും കുഴപ്പമുണ്ടെങ്കിൽ വിശദമാക്കുക*		

ഇതര പരിഹാര മാർഗ്ഗങ്ങളെക്കുറിച്ചുള്ള വിശകലനം NA

മറ്റു പരിഹാര മാർഗ്ഗങ്ങൾ എന്തെങ്കിലുമുണ്ടെങ്കിൽ (അത് കൂടുതൽ മെച്ചപ്പെട്ടതാണെങ്കിൽ മാത്രം) വിശദീകരിക്കുക	പാരിസ്ഥിതിക ബന്ധം 1. 2.	വേണ്ട പരിഹാര മാർഗ്ഗങ്ങൾ 1. 2.
നിർദ്ദേശിക്കപ്പെട്ട പരിഹാര/ലഘൂകരണ പദ്ധതി	പരിഹാര/ലഘൂകരണ പദ്ധതി നടപ്പാക്കാൻ എന്തെങ്കിലും ചെലവു വരുമെങ്കിൽ അതിന്റെ വിശദാംശങ്ങൾ	

തയ്യാറാക്കിയത്
ഒപ്പ്
പേർ
പദവി/തിരിച്ചറിയൽ ഉപാധി
തീയതി

Assistant Engineer L S G D Section
Kumbdaje H O / Bellur
Bellur Gramapanchayath

LESA സംബന്ധിച്ച കുറിപ്പ്

LESA നടപ്പാക്കേണ്ടത് ബന്ധപ്പെട്ട മുനിസിപ്പാലിറ്റി / ഗ്രാമ പഞ്ചായത്ത് എൻജിനീയറോ, ഒരു പരിസ്ഥിതി വിദഗ്ദ്ധനോ, വിദഗ്ദ്ധ ഏജൻസിയോ പ്രൊഫോർമ-എഫിൽ പറഞ്ഞിരിക്കുന്ന മാതൃകയിൽ ആയിരിക്കണം. പരിസ്ഥിതി ശാസ്ത്രം/പരിസ്ഥിതി എഞ്ചിനീയറിംഗ്/സിവിൽ എഞ്ചിനീയറിംഗ്/അതുമായി ബന്ധപ്പെട്ട വിഷയങ്ങൾ പഠിപ്പിക്കുന്ന വ്യക്തിക്കോ ഏജൻസിക്കോ പരിസ്ഥിതി സംബന്ധമായ വ്യക്തമായ കാഴ്ചപ്പാടുള്ളവർക്കോ LESA നടപ്പാക്കാം. പ്രാദേശിക ഗവൺമെന്റുകൾക്ക് അനേഷണ പ്രക്രിയയിലൂടെ അവരെ കണ്ടെത്തി പട്ടിക തയ്യാറാക്കിക്കൊണ്ട് ഇതിനായി വിനിയോഗിക്കാം. കൺസൾട്ടേഷൻ പ്രതിഫലമായി കുറഞ്ഞത് 1500 രൂപയും, പരമാവധി പദ്ധതിച്ചിലവിന്റെ 0.75% ഉം നൽകാവുന്നതാണ്.

LESA നടപ്പാക്കുന്നതിന് അഭിലഷണീയമായ നിബന്ധനകൾ ഇവയാണ്

- പദ്ധതി പ്രവർത്തനങ്ങൾ വിലയിരുത്തി പാരിസ്ഥിതികവും സാമൂഹികവുമായ ഗുരുതര പ്രശ്നങ്ങളുണ്ടാക്കുന്ന ഘടകങ്ങൾ കണ്ടെത്തുക
- ഇത്തരം പ്രവർത്തനങ്ങൾ പരിസ്ഥിതി ഘടകങ്ങളായ മണ്ണ്, ഉപരിതലജലം, ഭൂഗർജ്ജലം, അന്തരീക്ഷ വായു ശബ്ദതലം, സസ്യ-ജന്തുജാലം എന്നിവയിലും സമൂഹപുരോഗതിയിലും വരുത്തുന്ന ആഘാതങ്ങൾ എന്തെല്ലാമെന്നു കണ്ടെത്തി പരിസ്ഥിതി നാശം കുറയ്ക്കാനുള്ള മാർഗ്ഗങ്ങൾ നിർദ്ദേശിക്കുക
- പദ്ധതിയുമായി ബന്ധപ്പെട്ട് കൂടുതൽ മെച്ചപ്പെട്ട പാരിസ്ഥിതികവും സാമൂഹികവുമായ പ്രശ്നപരിഹാര മാർഗ്ഗങ്ങൾ ഇതര പദ്ധതികളിൽ നിലവിലുണ്ടോ എന്നു പരിശോധിക്കുക
- പദ്ധതിയുടെ പ്രവർത്തനത്തോടനുബന്ധിച്ച് അപകടങ്ങൾക്കുള്ള സാധ്യതകളുണ്ടോ എന്നു കണ്ടെത്തുകയും അതു തടയാനുള്ള മാർഗ്ഗങ്ങൾ നിർദ്ദേശിക്കുകയും ചെയ്യുക
- പദ്ധതിക്ക് പകരമുള്ള വഴികളുണ്ടെങ്കിൽ അതു പരിഗണിക്കുക-പ്രധാനമായും പദ്ധതിയുടെ സ്ഥലവും സാങ്കേതിക വിദ്യയും മാറ്റുന്നതിനെക്കുറിച്ച് ചിന്തിക്കുകയും അത്തരം മാർഗ്ഗങ്ങൾ സ്വീകരിച്ചാലുണ്ടാവുന്ന പ്രശ്നങ്ങളും ഇപ്പോഴുള്ളതും തമ്മിൽ താരതമ്യം ചെയ്യുക
- പദ്ധതി കൊണ്ടുള്ള പാരിസ്ഥിതികവും സാമൂഹികവുമായ പ്രശ്നങ്ങൾ കുറയ്ക്കുന്നതിനും പരിഹാരം നടപ്പാക്കുന്നതിനും എന്തെങ്കിലും ചെലവുണ്ടെങ്കിൽ അതു നിശ്ചയിക്കുക.