

Indian Institute of Astrophysics
Koramangala, Bangalore-560034

TENDER DOCUMENT

Tender Notice No: 05/IIA/CIVIL/Canteen - BR/2007

Name of the work: Renovation work in the Canteen at IIA
Koramangala, Bangalore - 560034

Indian Institute of Astrophysics
Koramangala, Bangalore-560 034

Tender Notice No: 05/IIA/CIVIL/Canteen - BR/2007

Dated 05.12.2007

**Name of the work: Renovation work in the Canteen at IIA Koramangala,
Bangalore - 560034**

Period of completion: 3 Months.

Cost of Tender document: Rs. 550.00

**Tender document
Sold to M/s**

Receipt No and date.

Sold by

Last date for request of tender application	:14.12.2007
Date of issuance of tender documents	:17.12.2007 to 21.12.2007
Last date of submission of tender	:26.12.2007 15:00 Hrs
Date and time of opening tender	:26.12.2007 15:30 Hrs

Administrative Officer.

Indian Institute of Astrophysics
Koramangala, Bangalore-560 034

Tender Notice No: 05/IIA/CIVIL/Canteen - BR/2007

Dated 05.12.2007

On behalf of the Director, Sealed item rate tenders in the prescribed form are invited from appropriate registered contractors in state PWD, CPWD, MES, and Private Body Competent Contractors who have executed works of similar nature in Scientific Institutions.

Sl. No	Name of the work	Estimated cost in Rs	Time for completion	EMD	Cost of tender doc
1.	Renovation in the Canteen at IIA., Bangalore-34	~ 11 Lakhs	3 Months	Rs.25,000/-	Rs.550.00

Tender documents will be issued to those tenderers who can satisfy on the basis of their past performance, experience in execution of similar type of work, their financial capability, technical manpower etc.

Request for issue of tender application forms for the work should accompany the attested copies of

1. Latest income tax clearance certificate.
2. Work experience certificate for having executed one single work of similar nature of same or higher value in last two years issued by the competent authority.
3. List of works executed, along with tools and plants and personnel.

Last date for request of tender application : 14.12.2007
Date of issuance of tender documents : 17.12.2007 to 21.12.2007
Last date of submission of tender : 26.12.2007 15:00 Hrs
Date and time of opening tender : 26.12.2007 15:30 Hrs

Based on the recommendations of the tender/technical committee, The Administrative Officer, IIA, Koramangala, Bangalore-34 will issue Tender form to the eligible contractors on payment of cost towards documents in cash (non-refundable).

The tenderers must submit sealed tenders with the name of the work superscribed on the cover duly completed in all respects to the Administrative Officer, IIA, Koramangala, Bangalore-34 on or before the last date. The tenders will be opened on 26.12.2007 at 15:30 hrs in the presence of the tenderers or their authorised representatives who are present at that time. Tenders should be accompanied by the EMD in the form of Demand Draft/ Bankers cheque only drawn in favour of The Director, Indian Institute of Astrophysics, Bangalore. The Director reserves the right to accept or reject any or all tenders without assigning any reasons there of.

Administrative Officer

Tender for the Renovation Work in the Canteen at IIA., Koramangala, Bangalore-34

Conditions of contract

Sealed item rate tenders are invited by Indian Institute of Astrophysics for the Renovation work in the Canteen, at IIA, Koramangala, Bangalore-34.

Estimated cost	: ~ Rs. 11.00 Lakhs (Rupees Eleven Lakhs)
Earnest money deposit	:Rs 25,000.00 (Twenty five thousand only). Demand draft/ Banker's cheque drawn in favour of the Director, Indian Institute of Astrophysics, Koramangala, Bangalore. Tenders without EMD will be rejected.
Time of completion	: Three Months.
Period of commencement	: 7 days from the date of receipt of work order
Percentage of retention money:	: 5% to be deducted from each RA bill and shall be released as under (i) 50% on completion of works and along with the final bill (ii) balance 50% less recovery, if any towards the cost of defects rectified by IIA due to lack of response of the contractor on completion of defects liability period and on certification by the Engineer-in-charge.
Defects liability period	: 12 Months.
Amount of liquidated damage	: 1%(one percent) per week subjected to the maximum of 10% of the value of contract.
Escalation	: In view of the short duration of the contract, no escalation will be paid to the contractor on account of changes in the market prices of any items of work or changes in the cost of living indices etc.

The Director, Indian Institute of Astrophysics reserves the right to reject any or all the tenders without assigning any reason whatsoever.

The scope of the work and explanatory notes given below are neither complete nor exhaustive but are added to assist the contractor to understand the scope of the work.

The site is located in IIA at Koramangala, Bangalore-34. Tenderers are advised to inspect and examine the site and its surroundings and satisfy themselves before submitting their tenders as to nature of the ground and subsoil, the form and nature of the site, the means of access to the site. A tenderer shall be deemed to have full knowledge of the site whether he inspects it or not and no extra charges consequent on any misunderstanding or otherwise shall be allowed, in general shall themselves obtain all necessary information.

The tenderer shall be responsible for arranging and maintaining at his own cost all **materials, tools and plants, water, electricity, facilities for workers, safety norms** and all other services required for executing the work.

Timely completion of work and quality of workmanship are of prime importance and the work shall be completed within the stipulated period. **Cement consumption must match with standard theoretical calculations. Recovery to be effected in the event of not fulfilling the cement consumption.**

I/ We have read the tender notice, specifications, schedule, drawings, general rules and all other contents of the tender conditions, and understood that you are not bound to accept the lowest or any tender you may receive.

I/ we hereby agree for the execution of the work specified above within the time specified and the rates specified in the attached schedule of quantities and in all respects with these specifications, design, drawings and instructions.

I/we agree that should I/we fail to commence the work specified in the above memorandum, an amount equal to amount of earnest money mentioned in the form of invitation of tender shall be absolutely forfeited to the Director.

Dated: -----

**Signature of the Contractor
With stamp**

Postal address.

Witness:

Address.

Occupation.

General conditions of the contract.

Item rate tender for works

- ❑ The Institute reserves the right to alter the scope /or reduce quantum of work before issue of Work Order and the contractor shall not have any claim what so ever on this account.
- ❑ Rates quoted by the contractor in item rate tender in figures and words shall be accurately filled in, so that there is no discrepancy in the rates written in figures and words. However if a discrepancy is found, the rates which correspond with the amount worked out by the contractor shall be taken as correct.
- ❑ If the amount of an item is not worked out by the contractor or it does not correspond with the rate written either in figures or words, then the rate quoted by the contractor in the words shall be taken as correct.
- ❑ When the rates quoted by the contractor in figures and in words tally but the amount is not worked out correctly the rate quoted by the contractor will be taken as correct and not the amount.
- ❑ The contractor shall take all precautionary measures to prevent entry of dust, dirt and noise pollution to the adjacent buildings and keep the premises neat and tidy, remove surplus materials and rubbish and shall not cause inconvenience to the staff of IIA. If the contractor or his working people or servants shall break, deface, injure or destroy any part of the building in which they may be working or any buildings, road, kerbs, fence, enclosure water pipes, cables, drains, electric and telephone posts or wire, trees grass or garden the cost of any such damage and risks arising out of this shall be entirely borne by the contractor.
- ❑ A bill shall be submitted by the contractor each month on or before the date fixed by the Engineer-in-charge. All the measurements of the work may be recorded jointly by the Engineer-in-charge and the contractor or their respective representatives. The measurements will be taken at site, as per latest IS code of practice for measurements. All measurements shall be taken with steel tapes only.
- ❑ The Engineer-in-charge shall have full powers to the removal from the premises of all materials and bad workmanship, which in his opinion are not in accordance with the specifications.
- ❑ The Engineer-in-charge may require the contractor to dismiss or remove from the site of the work any person or persons in the contractors employ upon the work who may be incompetent or misconduct himself.
- ❑ For working on Sundays, holidays and late hours prior permission will be accorded by the Engineer-in-charge on the application made by the contractor.

- ❑ All works to be executed under the contract shall be executed under the direction and subject to the approval in all respects of the Engineer-in-charge who shall be entitled to direct at what point or points and in what manner they are to be commenced and from time to time carried on.
- ❑ The contractor shall treat all materials obtained during dismantling of a structure, excavation of the site for a work etc. as Institute's property and such materials shall be disposed off to the best advantage of the Institute.
- ❑ The contractor shall execute the whole and every part of the work in the most substantial and workman like manner and in strict accordance with the specifications of the CPWD / DOS / Bureau of Indian Standards. In case of any class of work for which there is no such specifications the contractor shall carry out the work in all respects in accordance with the instructions in writing of the Engineer-in-charge.
- ❑ The Engineer-in-charge shall have powers to make any alterations in, omissions from, additions to or substitutions for the original specifications, drawings, designs and instructions that may appear to him necessary or advisable during the progress of the work and the contractor shall carry out the work in accordance. The rates for such additional, altered or substituted items of work shall be worked out in accordance with the standard procedure followed in CPWD / DOS.
- ❑ If at any time after the commencement of the work, the Director shall for any reason whatsoever not require the whole thereof as specified in the tender to be carried out, the Engineer-in-charge shall give notice in writing of the fact to the contractor who shall have no claim to payment of compensation whatsoever on account of any profit or advantage which he might have derived from the execution of the work in full, but which he did not derive in consequence of the full amount of the work not having been carried out, neither shall he have any claim for compensation by reason of any alterations having been made in the original specifications, drawings, designs and instructions which shall involve any curtailment of the work as originally contemplated.
- ❑ The contractor shall obtain a valid license under the contract labour (R&A) act 1970 and the contract labour (Regulation & Abolition) central rules, 1971 before the commencement of the work and continue to have a valid license until the completion of the work. No labour below the age of eighteen years shall be employed on the work. The contractor shall pay to labour employed by him either directly or through sub contractors, wages not less than fair wages as defined in the provision of the contract labour (R&A) act 1970 and the contract labour (R&A) central rules 1971 wherever applicable.
- ❑ The contractor shall at his own expense arrange for the safety provision as per safety code framed from time to time and shall at his own expense provide for all facilities in connection therewith.

- ❑ The contractor shall comply with all the provisions of the payment of Wages Act 1936, Minimum Wages Act 1948, Employees Liability Act 1938, Workmen's Compensation Act 1923, Industrial Disputes Act 1961 and the Contractors Labour (R&A) Act 1970 or the modifications thereof or any other laws relating thereto and the rules made there under from time to time. The regulations aforesaid shall be deemed to be a part of this contract and any breach thereof shall be deemed to be a breach of this contract. Security deposit will not be refunded till clearance certificate from Labour Officer is obtained by contractor.
- ❑ The contractor shall make his /their own arrangements for water required for the works and nothing extra will be paid for the same, as the water available from the Institute source may not be sufficient to meet the construction.
- ❑ The contractor shall have all the tools and plants necessary to carry out the work such as concrete mixer, vibrator and hoist. The contractor shall employ one Graduate Engineer during the execution of the work
- ❑ Certified plumbers should be employed by the contractor on the plumbing and sanitary work.
- ❑ The standard sectional weights referred to as standard tables in para 5.3.3 in CPWD specifications for works 1977 vol. 1 to be considered for conversion of length of various sizes of M.S bars and tor steel bars in to weight.

Size (diameter MM) Weight Kg/M

6	0.222
8	0.395
10	0.617
12	0.888
16	1.579
18	1.999
20	2.467
22	2.985
25	3.855
28	4.836
32	6.316

- ❑ The entire work is to be completed within the period stipulated i.e. Three months from the 15th day of issue of letter of intent/work order. The period includes monsoon period also. Time shall be the essence of the contract. After the work awarded, the contractors shall furnish detailed time schedules for the approval of the Engineer-in-charge which after approval shall form part of the contract and are to be strictly adhered to.

- ❑ The maintenance period for the work shall be twelve months and any defects noticed during the period shall have to be rectified by contractor at his cost, failing which the action taken for maintenance Engineer-in-charge shall be final over which the contractor will not have any claim.
- ❑ The contractor shall extend all co-operations to the contractors executing works such as electrical, air conditioning etc who might be working at the site and shall permit to use scaffolding etc. already put up by him.
- ❑ The Engineer-in-charge will have the right to get any item of the work included in this tender or not executed through other agencies. Schedule of probable quantities in respect of the work and specifications are enclosed. The schedules of probable quantities are liable to alterations by emission, deduction or additions at the discretion of the Engineer-in-charge.
- ❑ The rates quoted by the tenderer in the schedule shall be inclusive of all taxes and levies payable under respective statutes, inclusive of all sales taxes, sales tax on components/ materials/ consumables and also sales tax on works contract in pursuant to constitution (forty sixth amendment) act 1982, control duty and /or any other duty levied by the government or other public bodies. The rates shall be firm and shall not be subject to exchange variations, labour conditions or any condition.
- ❑ Sales tax will be deducted from the amount payable to the contractor as per the relevant sales tax act, applicable for the contracted work as amended from time to time, at the rates specified from time to time.
- ❑ Samples of all materials to be incorporated in the works shall be submitted to the Engineer-in-charge for his approval without claiming any extra cost. Materials not confirming strictly to the samples are liable to be rejected.
- ❑ The employment of any sub-contractors will be subjected to the approval of the Engineer-in-charge. If at any time during the progress of the work the Engineer-in-charge determines that any sub-contractor is incompetent or undesirable the contractor shall take steps immediately to cancel such sub-contractor. The contractor shall be entirely responsible for all the work included in the contract whether executed by him or through his sub-contractors. In particular it may be noted that the contractor shall obtain steel doors and windows from a reputed manufacturer and before placing order for these, the contractor shall obtain the concurrence of the department for the agency from whom he proposes to obtain steel doors and windows.
- ❑ The contractor shall prepare a CPM / PERT /BAR chart/ Detailed estimate programme within a weeks time of issue of work order.

- ❑ All materials and articles brought by the contractor to the work site shall have to be declared at the security gate. Similarly no materials shall be taken out from the departmental premises without proper gate pass which will be issued by the Engineer-in-charge.
- ❑ Unless otherwise provided in the schedule of quantities the rates tendered by the contractor shall be all inclusive and shall apply to all heights, lifts, leads and depths of the building and nothing extra shall be payable to him on this account.
- ❑ Sample of various materials required for testing shall be provided free of charge by the contractor. Testing charges, if any unless otherwise provided, shall be borne by the department. All other expenditure required to be incurred for taking the samples, conveyance, packing etc. shall be borne by contractor himself. In case of concrete and reinforced concrete work, the contractor shall be required to make arrangement for carrying out compression strength tests at his own cost including preparation of cubes curing etc complete.
- ❑ For the purpose of recording measurements and preparing running account bills, the abbreviated nomenclature shall be accepted along with the item number.
- ❑ The contractor shall along the tender submit a schedule of machinery to be used on the work in support of his assurance to adhere to the time schedule specified in the proforma given.
- ❑ The tenderers shall also submit along with the tender a list of similar major works as also the approximate cost of each work carried out by him in the past and are being carried out for different government department or public bodies along with the details of addresses of the agency to whom carried out in the proforma given.
- ❑ I /We declare that the work will be carried out as per the specifications in tender document and as per the specifications mentioned above. The items of work not covered in the specifications mentioned above will be carried out as per the specifications in the relevant CPWD specifications, and if not covered in CPWD specifications the work will be carried out as in the relevant IS specifications, and if not covered in any of the above, the work will be carried out as directed in writing by the Engineer-in-charge.
- ❑ I / We declare that the rates quoted by me/us are on the basis of the above.

Dated: -----

**Signature of the contractor
With stamp**

TENDERER'S EXPERIENCE

Tenderer shall furnish here a list of similar jobs executed by him to whom a reference may be made by the Indian Institute of astrophysics in case such a reference is necessary.

Sl. No	Name & description of work	Value of work and date.	Period of construction and date.	Client persons to whom reference may be made.

Seal of company

**Signature
Designation
Company
Date**

TOOLS AND EQUIPMENT LIST

The tenderer shall indicate herein below the equipment he has in possess and the equipment he proposes to bring to the site, in case the work is awarded to him.

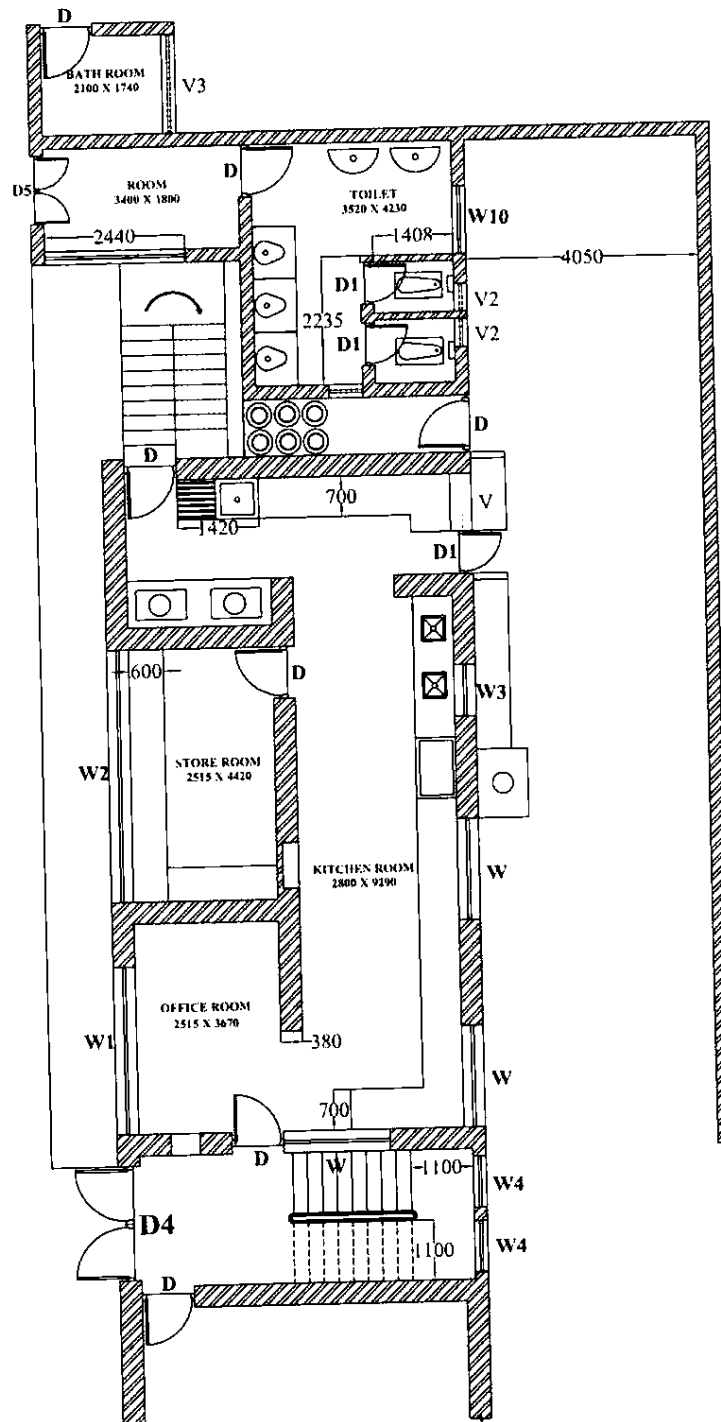
Sl. No	Type and Description of the equipment.	Numbers the bidder has in possession	Numbers he proposes to bring on to site

Tenderer hereby confirms that the quantity and type of tools he will employ for construction will not be less than those listed above and agree to bring more equipment if so warranted in the opinion of the Engineer-in-charge.

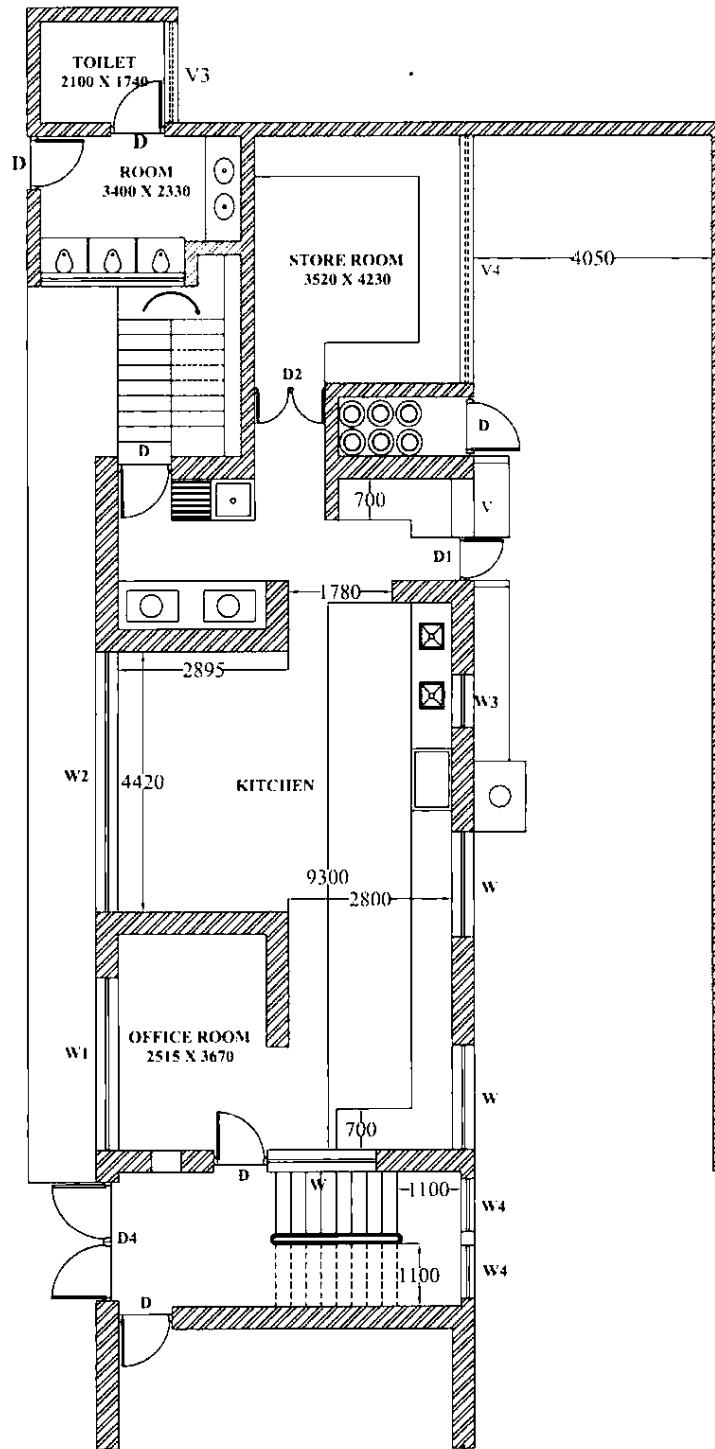
Seal of company

**Signature
Designation
Company
Date**

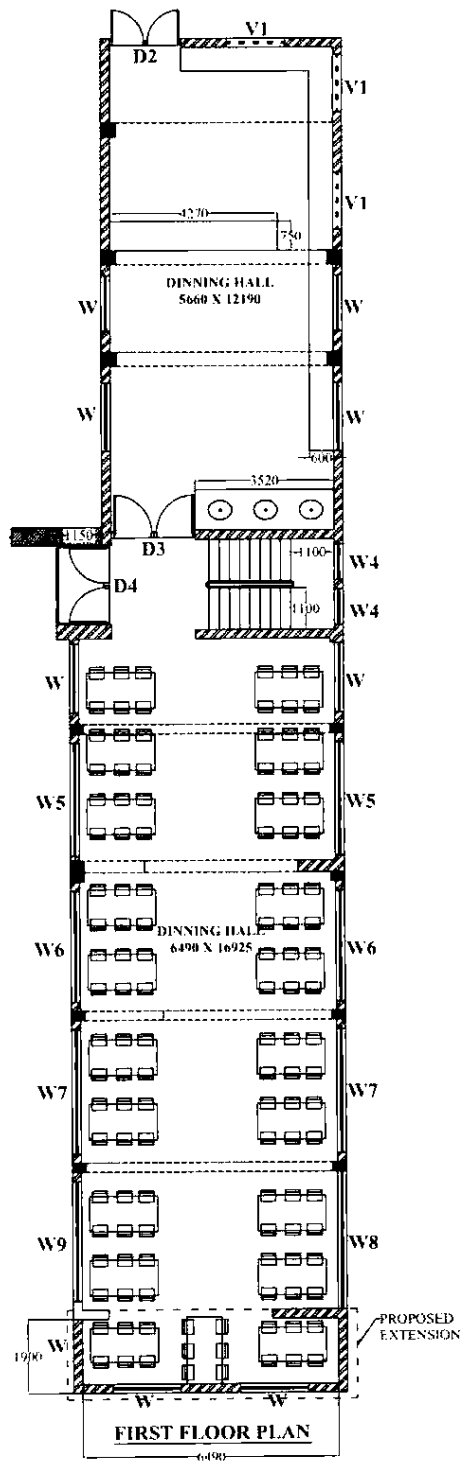
SCHEDULE OF QUANTITIES

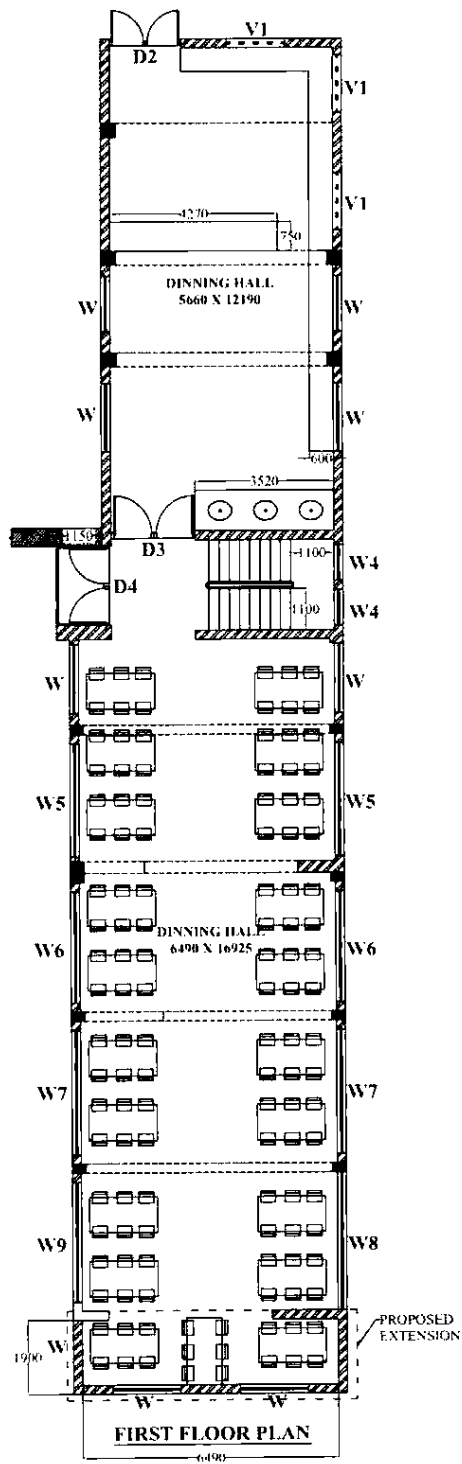


GROUND FLOOR PLAN



GROUND FLOOR PLAN





**ESTIMATE FOR RENOVATION WORK IN CATEEN BLOCK IIA,
BANGALORE.**

(PART1)

SL. NO	DESCRIPTION	UNIT	QTY	RATE Rs ps	AMOUNT Rs ps
1.	Providing and laying cement concrete using 40mm nominal size graded hard granite stone aggregate obtained from approved quarry including compaction, finishing top surface to level, curing, etc. complete including all lead and lift as per the directions of the Engineer in charge but excluding cost of form work. a)P.C.C in 1:4:8	Cum	10		
2.	Providing and constructing Brick Masonry in cement mortar as per mixes stipulated below using approved well burnt table moulded bricks of "Class Designation" (classifications as per IS 1077-1986) as specified below including raking out joints 10mm deep, scaffolding, curing, etc. complete as per specification in superstructure at all floors and all levels, (The mix ratio specified is for cement: coarse sand). Using table moulded bricks of class designation "5.0" (Minimum average compressive strength not less than "5.0" N/sqm). In cement mortar 1:6	Cum	25		
3.	Providing and laying reinforced cement concrete 1:1.5:3 using graded hard granite stone aggregate of 20mm nominal size obtained from approved quarry including mechanical mixing, vibrating compaction, finishing, curing etc. complete all as per specifications but excluding cost of form work and steel reinforcement at all levels and floors with all lead and lift as per the direction of engineer-in-charge.	Cum	5		
4.	Plastering 12mm thick with cement				

	mortar specified below, finished smooth with lime neeru, including scaffolding, curing, etc complete for internal surfaces of ceiling, etc. complete all as per specifications up to all floor and all level. Mix specified is for cement; fine sand. C.M 1:4	Sqm	500.00		
5.	Plastering 12mm thick with cement mortar specified below, finished rough, including scaffolding, curing, etc complete for external surfaces inclusive of sills, jobs, soffits, ceilings etc. complete all as per specifications for heights up to 10mts above GL. Mix specified is for cement; fine sand. C.M 1:4	Sqm	130.00		
6.	Painting plastered surfaces with two or more coats of paint of 1st quality of approved colour, shade, over one coat of cement coat primer and two coats of putty work to give an even shade including cleaning the surfaces, filling the crevices with approved filler, scaffolding, etc. complete all as per specifications (Rate to include cost of primer and putty) at all floors and all levels. a) Acrylic plastic emulsion	Sqm	720.00		
	b) Synthetic enamel paint.	Sqm	200.00		
7.	Painting external plastered surfaces with two or more coats of 100% acrylic exterior emulsion paint of approved and colour (weather coat of Berger or apcolitie apex of asian or equivalent) having protection against fungal, growth flaking, fading, alkali and UV degradation and to give an even shade with required finish including cleaning the surfaces, filling the crevices with approved filler, scaffolding, curing, etc. complete all as per specification, at all floors and				

	levels.	Sqm	175.00		
8.	Painting wood work with two or more coats of synthetic enamel paint of 1st quality and approved colour to give an even shade over a coat of synthetic enamel primer and an approved putty work including cleaning the surfaces, filling the crevices with approved filler, scaffolding, etc. complete all as per specifications, (Rate to include cost of synthetic enamel primer and putty work at all levels and at all floors).	Sqm	125.00		
9.	Providing and fixing 40mm thick granite stone slabs of approved size , shape and colour over a bed of 10 cms thick (1:4:8) cement concrete using 40 mm & down size jelly including fixing and pointing with C.M..(1:3), curing etc, Complete including providing one line dressing to stone slab	Sqm	5.00		
10.	Providing and fixing 20mm thick pre-polished granite of approved colour and pattern machine cut slabs in flooring and for urinal partitions of required size of approved shade colour and texture laid over 20mm thick base mortar 1:4 and the cement slurry at the rate of 4.4 Kg /Smt. for bedding with joints treated with grey cement mixed with matching pigments, touchup including rubbing, curing etc. complete as per technical specification.	Sqm	10.00		
11.	providing and laying 20 to 30 mm thick machine polished SHAHABAD stone slabs with machine cut edges and cut to required size , laid over a bed of 20mm thick cement mortar 1:6 and cement slurry at the rate of 4.4 kg/sqm for bedding and 2kg/sqm for joints and pointed with cement mortar , mixed with approved pigment to match the shade of stone slab, finishing to required level and slope,				

	curing, polishing, cleaning with oxalic acid and wax polishing etc; complete all as per specifications. a) In flooring b) In skirting	Sqm Rmt	75.00 60.00		
12.	Providing and fixing 50mm thick cuddapah machine cut of approved shade colour and texture laid over 20mm thick base mortar 1:4 with joints treated with grey cement mixed with matching pigments, touch up including grubbing, curing etc. complete all as per technical specification for shelves.	Sqm	20.00		
13.	Providing and laying vitrified tiles for flooring and dadoing of approved colour, make and size of 600 x 600 mm set in cement mortar bed 1:4, 20mm thick including pointing with epoxy resin based putty to match the colour of tiles. Rate to include for laying tiles of approved pattern and as directed by the engineer incharge. Including curing, acid wash etc. complete all as per engineer in charge. Basic price of tiles Rs 75/ sqft.	Sqm	90.00		
14.	Providing and laying ceramic tile flooring / dadoing using approved quality ceramic tiles as per IS 13756-1993, of size 200 x 300mm / 300x 300mm colour and thickness varying from 6.5mm to 8mm according to the dimensions of tiles and having a scratch hardness (Mohr's scale minimum 5) and other parameters confirming to IS-13630 of regular series (Naveen or Spartek) laid over a bed / backing of 12mm thick cement mortar 1:3, with cement slurry at 3.30 kg/sqm, jointed and pointed with matching white cement slurry mixed with approved matching pigment and finishing to required level, curing etc. complete all as per specification and as directed by engineer in charge at all	Sqm	165.00		

	floors. Basic price of tiles Rs 45/ sqft				
15.	Fixing available door and shutters after necessary carpentry work for the repairs if any including fixing in cement concrete	each	4		
16.	Providing and constructing in super structure at all heights 200 mm thick Terracotta Jali clay block masonry (confirms to IS 2185-(Part-1) 1979 (Reaffirmed 1992) including scaffolding, raking out joints, curing etc., 10 Kg weight of block having compressive strength of 40 Kg/ sqm. complete as per Architectural direction. (The mix ratio specified is for cement coarse sand).	Sqm	45		
17.	Providing, fixing, testing and commissioning of White colour round / oval counter top / bottom wash basin installed with brackets, 15mm dia CP pillar cock / mixer 32mm dia CP waste coupling, 32mm dia CP brass bottle trap, 15mm dia angle stop cocks, 15mm dia inlet CP pipes. The work shall include cutting and making good the walls and floors, painting the bracket, clamp, etc., complete.				
	(Granite shall be supply, fixing and making holes by other agencies and measured separately).				
	White Colour Wash basin - Oval shape (Cat No. 10016) Size 55 cm X 40cm				
	Central hole basin mixer JAQUAR 123 with swan neck tap with left hand operating knobs .With CP inlet connection 450mm long with check nut 32mm dia CP waste coupling - JAQUAR 705/709 continental 32mm dia CP bottle trap JAQUAR 773 CP angle stop cock with wall flange MS or CI Bracket support for WB if required (for below counter type)				

	make as per standard with screws, nuts and bolts etc., - JAQUAR 051/053.	each	2		
18.	Providing, fixing, testing and commissioning of approved make of white color wall mounting European Water Closet having a back inlet and 'P/S' Trap outlet and solid plastic seat and lid with CP hinges and rubber buffers. The work shall include cutting and making good the walls and floors for fixing the chair/bracket/frame for EWC etc., complete.				
	(I) EWC - Hindware (Cat No. 20027) cistern - Cascade Type (Cat No. 21016) including all parts.				
	(ii) CP 15mm dia Angle stop cock with wall flange continental Jaquar 051/053				
	(iii) Solid plastic seat and cover - Commander with champion CP hinges.				
	(iv) CP inlet connection pipe 450mm long - Jaquar.	each	1		
19.	Supplying, fixing, testing and commissioning of Urinal flat back with CP Waste coupling dome shape, urinal clamp CI/MS, CP bottle trap CP spreader, CP flush valve including cutting and making good the walls and floors etc., complete				
	Urinal Flat.(Jaquar) Large white - HSW (CAT No. 60002) (size 59 cms X 37.5cms X 39cm) CP Spreader / Jal / Arc dome shape / VIKING CAT NO. 51081 CP Urinal Flush valve CAT No. 1077 CP Bottle trap CAT NO. 769(PROVISION)	each	3		
20.	Providing, fixing, testing and commissioning of soap trap,paper holder with CP screws including cutting good the walls, floors, etc., complete. As per approved make				
	a.Soap dish JAQUAR 1131	each	2		
	b. Paper Holder with flap JAQUAR 21751	each	1		
21.	Providing, fixing, testing and				

	commissioning of CP short body bib cock with CP wall flange, including cutting and making good the walls, etc., complete				
	Make: JAQUAR, Cat No. 037.	each	2		
22.	Supplying, fixing, testing and commissioning of swan neck tap CP with right or left hand operating nob, (make : JAQUAR-123/127).	each	6		
23.	Providing, fixing, testing and commissioning of CP brass towel ring with flange with screws etc. including cutting and making good the wall. Floor etc. complete.				
	a. C.P. Towel Ring JAQUAR 1121	each	3		
	b. CP Towel Rail JAQUAR 1111	each	1		
24.	Providing, fixing, testing & commissioning lab stainless steel sink with single bowl and single drain with choke- stop strainer waste coupling and waste pipe etc., complete. The work shall include cutting and making good the walls, floors, etc., complete. Item. Make S.S.Sink with Nirali /franki omx 611 Waste coupling ELEGANCE MEDIUM & Waste Pipe Size : 1000 X 500 mm	each	4		
25.	Providing, fixing, testing & commissioning of Galvanized Iron Pipes to IS 1239-1982 (Medium class) including all GI fittings, 'R' brand like tees, elbows, couplers, reducer tees, reducer elbows, nipples threading and jointing using the pipes to fittings using white lead / hold tite, Teflon tape and providing MS supports Hi-tech support. Fabricated MS Angle as per requirements, 'U' clamp, anchor, nuts, bolts, etc., grouted in the wall / floors, cutting and making good the walls and floors in CM 1:4 etc., complete (Make GI pipe TATA 'B' CLASS).				

	a) 20mm dia.	Rmt	10		
	b) 25mm dia.	Rmt	10		
	c) 32mm dia.	Rmt	10		
26.	Providing, fixing, testing and commissioning of PVC pipes SWR (Type A for vent A.S.P pipe and type 'B' for soil and waste pipe line as per IS 13592 including all types of required fittings like tee, elbow, bend 'Y' off set, inspection door cowl, cleansing pipe door etc., jointing with rubber ring, PVC cement solvent, F.R.P paste, M-seal etc., the cost includes the supporting of pipes like fasteners, hitech supports, clamps, nuts, bolts, rings or fabricated MS angle as per design and requirements, cutting the floors, wall (RCC) and making good the same in CC 1:2:4 and CM 1:4 including scaffolding cost etc., complete (pipes can lay in sunken slab, ducts, walls, ceiling level etc.,) (Make : Kisan/Supreme/Prince). a. 40mm dia (10 kg/cm2, IS 4985) b. 50mm dia (10 Kg/cm2,IS 4985) c. 75mm dia (S.W.R type 'B' 6 kg/cm2, IS 13592) d. 110mm dia (S.W.R type 'B' 6 kg/Cm2, IS 13592).	Rmt	10		
27.	Providing, fixing, testing and commissioning of 5.5mm thick superior quality mirror of required size complete with 6mm thick marine plywood sheet painted and fixed with CP screws and washers including providing decorative teakwood frame 2" width (50 mm wide) as required (Belgium glass or Konica make) cutting and making good the walls, floors, etc., complete.	Sqm	1.70		
28.	Providing and fixing steel windows				

	and using 80 x 60 x 1.6m beveled section for frame and 44 x 44 x 1mm specially designed double flange shutter on one side with 4mm plain glass aluminum diecast handle, powder coated telescopic stay with one coat of red oxide zinc chromite primer with fully glazed shutters on one side including grill work etc. complete	Sqm	6		
29.	Providing and fixing of colour coated G.I sheets of profile 1080mm	Sqm	30.00		
30.	Providing and laying water proofing over RCC roof in 3 courses as specified below after thoroughly cleaning the surface of roof slab with wire brush , cleaning of dust and foreign matters, raking and cleaning of construction joints if any etc. complete to make the surface suitable for receiving water proofing treatment. I COURSE: the existing covering on the slab to be removed and the surface of RCC slab exposed. Construction joints if any are to be raked and cleaned. A coat of cement slurry at the rate of 4.4 kg/m mixed with acrylic water proofing compound 9 as per manufacturer's specification) is spread uniformly over the RCC roof area and ensuring that the slurry penetrates into the RCC slab below fills all micro cracks and all other porous area. Over this a layer of 15mm thick cement mortar 1:5, mixed with acrylic water proofing compound as per manufacturer's specifications shall be laid to place the II course. II COURSE: A single layer of brick on edge with 15mm wide gaps filled with CM 1:5 mixed with acrylic water compound in laid (i.e. bricks placed				

	vertically on its 75 x 115mm side or 75 x 230mm side as the case may be, to suit the required thickness of course) when the bottom layer (I course) still green and laid to a slope of 1 in 60 as per roof drainage scheme using approved well burnt bricks (water absorption not more than 20%) with min. thickness of 65 mm at outer edge including top and bottom plastering (I and III course) to get required gradient, laying the bricks with not less than 15mm gap all around which shall be properly filled completely and compacted with CM 1:5 mixed with acrylic water proofing compound as per manufacturers specification using full bricks or bricks cut to required size to lay the course with single layer with gradient said above for adequate drainages. III COURSE: 20mm thick cement mortar 1:4 mixed with acrylic water proofing compound with a layer of chicken mesh 12mm x 260 and marked with 300mm x 300mm false squares including curing etc. for not less than 7 days, complete all as per specification and directions of engineer in charge the 20mm thick layer shall be carried out in two layers of 10mm thick with an inter layer of chicken mesh of 12mm x 260 laid in between the two layers of cement mortar.	Sqm	10		
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31.	Supplying, fabricating and erecting in position steel works in single section or built up sections in angles, tees, channel section, I section including cutting, hoisting, fixing in position, applying a priming coat of red oxide zinc chromate primer and painting with two coats of synthetic enamel paint using bolts, nut as necessary all as per drawings and specifications at all heights.	Tonnes	2.5		
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TOTAL

**ESTIMATE FOR RENOVATION WORK IN TOILET BEHIND OPTICS LAB.
(PART 2)**

SL. NO	DESCRIPTION	UNIT	QTY	RATE		AMOUNT	
				Rs	ps	Rs	ps
1.	Dismantling the tile work in floors, wall including old plastering and stacking the material with in 50mtrs lead. (including Canteen, kitchen and toilets)	SQM	180				
2.	Demolishing of brick work in cement mortar including stacking of serviceable material and disposal of unserviceable material with in 50 mtrs lead.	Cum	8				
3.	Providing and laying ceramic tile flooring / dadoing using approved quality ceramic tiles as per IS 13756-1993, of size 200 x 300mm / 300x 300mm colour and thickness varying from 6.5mm to 8mm according to the dimensions of tiles and having a scratch hardness (Mohr's scale minimum 5) and other parameters confirming to IS-13630 of regular series (Naveen or Spartek) laid over a bed / backing of 12mm thick cement mortar 1:3, with cement slurry at 3.30 kg/sqm, jointed and pointed with matching white cement slurry mixed with approved matching pigment and finishing to required level, curing etc. complete all as per specification and as directed by engineer in charge at all floors. Basic price of tiles Rs 45/ sqft	SQM	65				
4.	Providing and constructing Brick Masonry in cement mortar as per mixes stipulated below using approved well burnt table moulded bricks of "Class Designation" (classifications as per IS 1077-1986) as specified below including raking out joints 10mm deep, scaffolding, curing, etc. complete as per specification in						

	superstructure at all floors and all levels, (The mix ratio specified is for cement: coarse sand). Using table moulded bricks of class designation "5.0" (Minimum average compressive strength not less than "5.0" N/sqm). In cement mortar 1:6	Cum	5		
5.	Providing, fixing, testing and commissioning of White colour round / oval counter top / bottom wash basin installed with brackets, 15mm dia CP pillar cock / mixer 32mm dia CP waste coupling, 32mm dia CP brass bottle trap, 15mm dia angle stop cocks, 15mm dia inlet CP pipes. The work shall include cutting and making good the walls and floors, painting the bracket, clamp, etc., complete. NOTE:-(items to be removed at CREST campus Hoskote and to be fixed at site).Rate including removal and fixing from CREST to site.	each	2		
6.	Providing, fixing, testing and commissioning of approved make of white color wall mounting European Water Closet having a back inlet and 'P/S' Trap outlet and solid plastic seat and lid with CP hinges and rubber buffers. The work shall include cutting and making good the walls and floors for fixing the chair/bracket/frame for EWC etc., complete. Note:- European water closet to removed from CREST campus and to be fixed at site. Rate including removal and fixing from CREST to site.	each	2		

7.	Supplying, fixing, testing and commissioning of Urinal flat back with CP Waste coupling dome shape, urinal clamp CI/MS, CP bottle trap CP spreader, CP flush valve including cutting and making good the walls and floors etc., complete NOTE:- (items to be removed at CREST campus Hoskote and to be fixed at site).Rate including removal and fixing from CREST to site.	each	1		
8.	Providing, fixing, testing and commissioning of soap trap,paper holder with CP screws including cutting good the walls, floors, etc., complete. As per approved make NOTE:- (items to be removed at CREST campus Hoskote and to be fixed at site).Rate including removal and fixing from CREST to site. a) soap dish. b) Paper holder.	each	3		
		each	2		
9.	Providing, fixing, testing and commissioning of CP short body bib cock with CP wall flange, including cutting and making good the walls, etc., complete NOTE:- (items to be removed at CREST campus Hoskote and to be fixed at site).Rate including removal and fixing from CREST to site.	each	3		
10.	Supplying, fixing, testing and commissioning of swan neck tap CP with right or left hand operating nob, NOTE:- (items to be removed at CREST campus Hoskote and to be fixed at site).Rate including removal and fixing from CREST to site.	each	4		

11.	Providing, fixing, testing and commissioning of CP brass towel ring with flange with screws etc. including cutting and making good the wall. Floor etc. complete. NOTE:-(items to be removed at CREST campus Hoskote and to be fixed at site).Rate including removal and fixing from CREST to site. a) C.P Towel Ring. b) C.P Towel Rail.	each	3		
		each	1		
12.	Providing, fixing, testing & commissioning of Galvanized Iron Pipes to IS 1239-1982 (Medium class) including all GI fittings, 'R' brand like tees, elbows, couplers, reducer tees, reducer elbows, nipples threading and jointing using the pipes to fittings using white lead / hold tite, Teflon tape and providing MS supports Hi-tech support. Fabricated MS Angle as per requirements, 'U' clamp, anchor, nuts, bolts, etc., grouted in the wall / floors, cutting and making good the walls and floors in CM 1:4 etc., complete (Make GI pipe TATA 'B' CLASS). a) 20mm dia. b) 25mm dia. c) 32mm dia.	Rmt	10		
		Rmt	10		
		Rmt	10		
13.	Providing, fixing, testing and commissioning of 5.5mm thick superior quality mirror of required size complete with 6mm thick marine plywood sheet painted and fixed with CP screws and washers including providing decorative teakwood frame 2" width (50 mm wide) as required (Belgium glass or Konica make)				

	cutting and making good the walls, floors, etc., complete. NOTE:- (items to be removed at CREST campus Hoskote and to be fixed at site).Rate including removal and fixing from CREST to site.	SQM	2		
14.	Fixing of Aluminium windows NOTE:- (items to be removed at CREST campus Hoskote and to be fixed at site).Rate including removal and fixing from CREST to site.	each	3		
15.	Fixing available door and shutters after necessary carpentry work for the repairs if any including fixing in cement concrete NOTE:- (items to be removed at CREST campus Hoskote/ I.I.A campus and to be fixed at site).Rate including removal and fixing from CREST to site	each	3		

TOTAL(Part 2)=

TOTAL OF PART 1 =

TOTAL OF PART 2 =

GRAND TOTAL =