

ADDENDUM TO TENDER

BID REFERENCE: CI:SCI:RT/ROG/P-I/2017-18/01 Dt. 12/07/2017

TENDER FOR SUPPLY, INSTALLATION & COMMISSIONING OF LINEAR ACCELERATOR ON TURNKEY BASIS TO DEPARTMENT OF RADIATION ONCOLOGY AT CANCER INSTITUTE (WIA), ADYAR, CHENNAI

A) DESCRIPTION OF WORK: RENNOVATION OF CIVIL WORKS

Sr. No	Item Description	Qty.	Unit
	CIVIL AND INTERIOR WORKS		
1	Excavation in all types of soil including dense soil, disintegrated/ weathered/ soft rock (Poclainable) for Footings of columns, Retaining walls, Core walls, catch pits, Pits, Trenches, etc., by mechanical means including manual excavation for leveling, dressing the edges, with all leads and lifts including back filling in layers of 150mm with watering and compaction. dewatering of both ground and surface water, removal of slurry generated while excavation and keeping the area free of water with necessary shoring, struting, required for keeping earth in position etc, Rate to include disposing the excess earth and spreading in layers to the required levels within the site wherever specified by the local authorities. Note: Working space and Provision of slopes if required for execution shall not be paid seperately. Rate to include all royalties, Seignorage, taking statutory approvals as necessary to carry out the works etc., complete.		
	Upto 1.50 Metre depth below average ground level.		Cum
	Supply and filling in foundations and the area wherever specified with approved good quality filling materials in plinths, area development etc. wherever specified in layers of not exceeding 150 mm thick including breaking clods, storing, transportation, double handling, watering, compacting each layer with vibratory compactor and at unaccessible places with wooden/steel rammers to achieve 90 to 95% proctor density at optimum moisture content, all leads and lifts, bailing/ pumping out of water to keep site dry while backfilling; cost shall include conveyance of all materials, labour, machinery etc. complete as directed. The rate to includes loading, unloading, hire and fuel charges for tools and plants, all royalties, taking statutory approvals as necessary to carry out the works and other incidental charges etc., complete. (Soil excavated from within site can be used)		Cum

Sr. No	Item Description	Qty.	Unit
1	Providing and casting in situ cement concrete M-25 (Concrete Density 2.35 gms/cc) of trap / granite /quartzite/ gneiss metal for R.C.C. Walls as per detailed designs and drawings or as directed including centering, formwork, cover blocks compacting and roughening if special finish is to be provided and curing complete. (Excluding reinforcement).With fully automatic micro processor based PLC with SCADA enabled reversible drum type concrete mixer. With natural sand.		
i	Between Maze and Console with Bed thickness 800mm		Cum
ii	Between Maze and Waiting hall with Bed thickness 600mm		Cum
iii	At Machine opposite inside Side Wall with Bed thickness 500mm		Cum
iv	Between Blood sample Room and Machine with Bed thickness 450mm		Cum
v	At Console with Bed thickness 300mm		Cum
vi	Near PET CT with Bed thickness 230mm		Cum
vii	Between Console and Maze with Bed thickness 200mm		Cum
viii	At roof top with Bed thickness 900mm		Cum
2	Providing and injecting chemical emulsion for PRE-CONSTRUCTIONAL anti-termite treatment and creating a chemical barrier under and around the column pits, wall trenches, basement excavation, top surface of plinth filling, junction of wall and floor, along the external perimeter of building expansion joints, surroundings of pipes & conduits etc. complete (plinth area of the building at ground floor only shall be measured). (Chloropyrophos 20%)		Sqm
9	Supply of MS plate 70mm thick , 7.89g/CC (5602MM X 2794MM) AND (2705mm X 3500mm)		KG
10	Supply of MS plate 265 mm thick , 7.89g/CC (3020X 4668MM) and (368mmx 113mm)		KG
11	Supply of MS plate 113mm thick , 7.89g/CC , (368mm x 4668mm)		KG
12	150mm thick Brick work in work with bricks of class designation 75 in super structure above plinth for all heights in cement mortar 1:4 (1 cement : 4 coarse sand)		Sqm
13	230mm thick Brick work in work with bricks of class designation 75 in super structure above plinth for all heights in cement mortar 1:4 (1 cement : 4 coarse sand)		Sqm

Sr. No	Item Description	Qty.	Unit
14	Dismantling of Plain Cement Concrete or Flooring or Brick work to any depth and width, at all levels below & above Ground Level of any shape, removal of debris, disposing the same away from the site, loading and unloading, making the surface good etc. complete. Rate shall include for dismantling of Plain Cement Concrete / Brick work by manually / mechanical means with necessary tools and plants, scaffolding, water and power charges, cleaning the surface, preparation of surface etc. Rate shall include for stacking the serviceable materials and disposing the unserviceable materials/debris away from the site premises by mechanical means including loading, unloading, clearing the site etc. complete, as directed.		Cum
	Providing and applying 12mm thick plaster in cement mortar mix ratio CM 1:6 (1 cement : 6 sand) mixed with polypropylene fibers as per instruction of the approved manufacturer, to internal surfaces of concrete and masonry work; including raking out joints, hacking concrete surfaces and applying approved chemical bonding agent and applying a scratch coat over concrete surfaces by bonding / adhesive chemical coat as directed by approved manufacturer to create a key, cleaning / grooving deep junctions of concrete & masonry, grouting then back by mortar mixed with non shrinking compound along with packing of clean, fresh square cut aggregate; also providing and fixing 20 gauge GI chicken mesh @ 150 mm wide to junctions of concrete and masonry, preparing jambs, sills, grooves, pattas, wattas, rounding of corners, etc. all complete as per architectural drawings, specifications and finished smooth with wooden rundha etc. or as specified by the PM at all leads,depth and lifts, doing independent double-legged scaffolding, cleaning of surfaces, curing, etc. complete as per specification and to the approval of the PM. (Location : Internal Wall surfaces)		Sqm
16	Providing and applying plastic emulsion paint of approved make and colour conforming to IS in two coats (surface and finish acceptable to the PM must be achieved by the contractor and any additional coats if required shall be at the cost of the contractor); including preparing surfaces, filling up with gypsum or approved crack filler, binder; cleaning and making the surface dust-free, applying a sealer or primer coat of paint as recommended by approved paint manufacturer, applying two coats of paint (of approved make and shade), required scaffolding, cleaning and protecting till the handing over of site to the employer all complete to entire satisfaction of the PM. (Location:Internal walls)		Sqm
17	Providing concrete of grade M25 platform base for Linac Machine and Chiller		Cum

Sr. No	Item Description	Qty.	Unit
18	Fabrication, Supply and Fixing in position all works complete of Light duty MS Grating with one coat of Primer and two coats of Finished Paint		RMT
19	Providing and fixing 600mm x 600mm x 15mm thick Mineral fibre grid false ceiling system as manufactured by M/s. Armstrong or equivalent approved; fixed using hot dipped galvanized steel section, exposed surface with pre-coated cappings, tees, rotary stitched cross tees, sub cross tee and wall angle fixed to the periphery of the wall. The grid shall be suspended at every 1200mm c/c. in both directions using 2.0 mm. thick pre-straightened GI wire, including cutting and making arrangement with required reinforcement, to fix light fillings, AC grills, access services doors/panel required double legged scaffolding / staging, finishing joints smooth to correct line and level complete having 3 coats of white paint back of the tile duly sanded and finished with a coat of protective paint over the formed grid complete all as per approved reflected false ceiling layout to approval and satisfaction of the PM.		Sqm
20	Supply of Modular flush door with frame approx size 900 X 2100mm with 35 mm thick solid wood, including lock, handle, keel and other accessories for inner main door.		No
21	<p>Providing and fixing 35mm thick flush door shutters single leaf / Double leaf of solid core of block board type bonded with phenol formaldehyde synthetic resin thermo pressed with 8 mm thick teak wood tongue & groove external lipping. The construction procedure of the shutter should be as per IS 2202. The shutter shall be shop prepared for taking mortice lock or latches suitable lock block of wood may be provided for fixing the hardware. The size of block, shall perfectly correspond to the maximum size of lock, covered in IS 2209. All the four edges of the door shutter shall be square. The shutter shall be free from twist or warp in its plane and of required size etc. complete as directed.</p> <p>Rate shall include for supplying and fixing the door with necessary approved hardwares such as S.S.ball bearing Hinges of satin finish of suitable size and thickness with S.S.Screws, Mortice Lock with handle, lever handle with lock, SS forend and SS strike plate, europrofile cylinder, all of Satin finish Grade SS 304 confirming to BS 7352 , door closer with Paralel arm bracket in Active Leaf , stainless steel tower bolt, S.S latches, door stoppers, door buffers etc. complete and as directed and all as per the approved make and model as mentioned in the drawing</p>		No

Sr. No	Item Description	Qty.	Unit
22	Providing and laying approved quality, colour, design and shade fully homogeneous Vitrified tile 600mmx600mm (confirming to IS 15622 / EN 176 Group B1a and water absorption less than 0.08%) flooring in pattern as detailed in drawing or as directed by the PM. Tile to be bedded over cement concrete screed using approved quality compatible adhesive of approved make, joints to be cleaned and grouted with matching colour approved quality polymer based readymade grout, curing, cleaning etc. to required line, level, etc. all complete at all heights, lifts and leads to the entire satisfaction of the PM. The tile should be grouted having 5mm epoxy filler of approved shade as per tile color .		Sqm
23	Providing and laying approved quality, colour, design and shade fully homogeneous Vitrified tile 300mmx300mm (confirming to IS 15622 / EN 176 Group B1a and water absorption less than 0.08%) flooring in pattern as detailed in drawing or as directed by the PM. Tile to be bedded over cement mortar 1:3, joints to be cleaned and grouted with matching colour approved quality polymer based readymade grout, curing, cleaning etc. to required line, level, etc. all complete at all heights, lifts and leads to the entire satisfaction of the PM. The tile should be grouted having 5mm epoxy filler of approved shade as per tile color .		
i	For Machine Room		Sqm
ii	For TPS Room		Sqm
24	Providing and applying plastic emulsion paint of approved make and colour conforming to IS in two coats (surface and finish acceptable to the PM must be achieved by the contractor and any additional coats if required shall be at the cost of the contractor); including preparing surfaces, filling up with gypsum or approved crack filler, binder; cleaning and making the surface dust-free, applying a sealer or primer coat of paint as recommended by approved paint manufacturer, applying two coats of paint (of approved make and shade), required scaffolding, cleaning and protecting till the handing over of site to the employer all complete to entire satisfaction of the PM. (Location: Internal walls)		Sqm
25	Supply of working table in control console area 12' X3' X 3'.6"		Nos
26	Wooden almirah inside linear accelerator room of size 6' X 7' X 2'		Nos
27	Supply of over head cabinet 12' X 2'.6" X2'		Nos
28	Wooden table 20 RFT for TPS room		Nos
29	Storage cabinet for TPS room 20RFT.		Nos
30	Supply of Chairs		Nos

Sr. No	Item Description	Qty.	Unit
32	<p>Designing, providing and laying proprietary chemical water proofing system consisting of polymer modified acrylic base composite coating (of one part or two part component) as approved by the Client and as recommended by the approved manufacturer of waterproofing coating, sandwiched nylon mesh / fibre mesh and protective screed. The work shall include removing of existing waterproofing course, cleaning of surface, grouting porous surfaces including making 'V' grooves at junctions, cracks etc. Further including horizontal surface protected with 20mm screeding in 1:4 mortar (1 cement : 4 sand) and vertical surface (wall) plastered with cement, sand mortar in ratio 1:4 (1 cement : 4 sand), finished in ready to receive Architectural finish, in correct line, level and plumb, curing, grouting, testing, etc. all complete to entire satisfaction of the PM, contractor to provide guarantee for 10 years Rs.100/- stamp paper in approved proforma.</p>		Sqm
34	<p>Making Core Cutting of size 150mm dia in slabs / beams / retaining walls and any other R.C members to any dia & depth by using 'HILTI' make diamond drilling machine with tolerance for any type of inserts, anchor fasteners etc. Rate shall include for sealing the gaps between RC surface and inserts with fire retardent grouting material as per manufactures specification ,all charge, preparation of surface, cutting of reinforcement, cleaning the surface, staging, scaffolding with necessary tools and equipments water and power, removal of debris from the site, staging scaffolding etc complete, as directed.</p>		Nos
35	<p>Co-ordination for Fixing of base frame and Pouring Concrete of grade M25 as directed by Engineer in Charge</p>		Cum
37	<p>Structural Consultancy Fees, including providing Stability Certificate and Test Certificates from government recognized institutes for Concrete and Steel</p>		LS

B) DESCRIPTION OF WORK: RENNOVATION OF ELECTRICAL WORKS

Sl. No.	Description of Item	Qty	Unit
	ELECTRICAL WORKS		
I	SECTION-A: SUPPLY, FIXING, TESTING & COMMISSIONING MAIN PANEL & DISTRIBUTION BOARDS		
1.1	Supply, Installation, Testing and Commissioning of following LT Panel shall be designed for 415V, 3 Phase, 50Hz, 4wire A.C system made up of sheet steel, dust and vermin proof of Cubicle type, Indoor type, floor mounting, free standing, L.T panel compartmentalized design and fabricated with 2mm CRCA sheet steel for main frames, folded sections and load bearing members and 1.6mm CRCA sheet steel for doors & covers and base channel 75mm X 40mmX 3mm and removable Gland plates at bottom and top entry complete with adequate rating of bus-bars, single bus-bar system, interconnections, cable chamber, powder coated painting, earthing etc., as mentioned in the Schedule of quantity / schematic diagram. Providing and fixing of below Panel with all accessories. The LT panel shall be accommodated in a modular multi type arrangements, adequate size of cable rack in cable chamber, painting, Two separate earth bus-bar throughout the length of the panel, numbering, danger plate etc. as per the drawings etc as required.		
a	MAIN LT PANEL		
	Incomer :		
	400A TP&N 25KA MCCB1 No with RYB Phase indication lamps, control MCB and all other required accessories. - 1 No.		
	Instruments Panel		
	Digital type Ammeter, Voltmeter, kWh meter, necessary CTs, and On-Off-Trip trip indicating lamps with control MCB etc. as per schematic layout.		
	400A 25 KA TPN Aluminium busbars		
	Outgoings :		
	40A TPN MCCB 25KA with all other required accessories - 1 Nos for LDB		
	63A TPN MCCB 25KA with all other required accessories - 5 Nos for HVAC - 2 nos, PDB - 2 nos & Spare - 1 no		
	100A TPN MCCB 25KA with all other required accessories - 1 No for Chiller		
	250A TPN MCCB 25KA with all other required accessories - 1 No for 120KVA UPS		
	With necessary Aluminium busbar interconnection providing control MCB, ON, OFF indication lamps etc. for each outgoing feeders as per schematic layout.		

Sl. No.	Description of Item	Qty	Unit
	With necessary Aluminium busbar interconnection etc. for each outgoing feeders as per and schematic layout.	1	Each
b	Clinac with OBI Costmer Control Board		
	Incomer :		
	250A TPN 25KA MCCB with RYB Phase indication lamps, control MCB and all other required accessories. - 1 No.		
	Instruments Panel		
	Digital type Ammeter, Voltmeter, Earth Falt Relay, necessary CTs, and On-Off-Trip trip indicating lamps with control MCB etc. as per schematic layout.		
	250A 25 KA TPN Aluminium busbars		
	Outgoings :		
	100A 25KA 4pole MCCB - 2nos, 100A 4pole power contactor - 2nos		
	24VDC aux Contactor - 5 Nos, 110VAC aux contactor - 4 nos, 230VAC aux contactor - 1 no		
	16A Double pole MCB - 7 Nos, 40A 4P MCB - 2 nos, 230/24v 5A Power supply - 1 No		
	With necessary Aluminium busbar interconnection providing control MCB, ON, OFF indication lamps etc. for each outgoing feeders as per schematic layout.		
	With necessary Aluminium busbar interconnection etc. for each outgoing feeders as per and schematic layout.	1	Each
1.2	DISTRIBUTION BOARDS:		
	Supply, Installation, Testing and Commissioning of the following TPN MCB distribution boards shall be designed for metal door type IP 42 protection, with MCB / Isolator / RCCB / RCBO as incomer. The distribution boards shall be designed for 415V,3Ph,50Hz, 4 wire AC system sheet steel, dust and vermin proof suitable for wall mounting type (recessed) designed and fabricated made up of Standard reputed make manufacture. The DB shall have suitable neutral and earth terminal block to facilitate easy termination of wires. All wires inside the DB shall be terminated using copper crimping socket. The DB shall be suitable body earthing terminals with powder coated painting, danger board, sign writing including minor civil works (recessed system) etc as required.		
a	LDB 1		
	The double door type 4 Way TPN Compartmental Horizontal (7 Segment Phase Segregation) MCB DB comprising of the following		
	Incoming		
	32 A TPN MCB 'C' Curve – 1 No.		
	Outgoings		

Sl. No.	Description of Item	Qty	Unit
	32 A DP 30 mA RCCB – 3 Nos. as outgoing with 12 Nos 6A SP MCB 'C' Curve		
	(Each 32A DP 30 mA RCCB consist of 4 Nos of 6A 10 KA SP MCB 'C' Curve)		
	With necessary tinned copper busbars, interconnections, separate earth bus, separate neutral bus for each phases. The board shall be powder coated type fixed with concealed system in wall. The rate shall include necessary connected civil works like chipping, rough plastering to match with good original surface etc.	1	Each
b	PDB (Bunker & TPS Room)		

C) DESCRIPTION OF WORK: SUPPLY, INSTALLATION & COMMISSIONING OF HVAC

Sr. No.	Item Description	Qty.	Unit
1	Supply installation testing commissioning of 8.5 ton ductable split unit with supply of grills, ducting, insulation with 4 fresh air arrangement, upto 5 mtr copper pipe considered.(N+N) with 100% standy-by		
2	Supply of 2 ton Hi wall split unit for TPS room with 5 kva stabilizer, upto 5 mtr copper pipe considered with 100% stand-by		
3	Supply of 2 ton Hi wall split unit for UPS room with 5 kva stabilizer, upto 5 mtr copper pipe considered with 100% standy-by		
4	Supply of Ceiling suspended unit for control consol area2 tr, upto 5 mtr copper pipe considered.		
5	Supply installation of Hooks for lifting, shifting, and installation of Linac machine.		

Note:

- 1) The bidder quoting for the equipment, shall also quote for the entire turnkey schedules.
- 2) The bidder shall quote for the entire in the prescribed format SECTION – XI (G) - PRICE SCHEDULE FOR TURNKEY.
- 3) The bidder shall quote for all the schedules, if any of the schedules are not quoted, then their bid will be treated as non responsive.
- 4) The quote for turnkey basis shall be in INR only, if quoted rates are in any other currencies, then their bid will be treated as non responsive.
- 5) The bidder shall submit this schedule as a part of technical bid with the signed & sealed in all pages.

Name: _____

Business Address _____

Signature of Tenderer _____

Seal of the Tenderer _____