

Name of Work :- Development Of Permanent Campus Of Nu Rajgir.						
Subject :- Schedule-B (MR Items)						
Sr.no	MR Items	Total Quantity	Description	Unit	Rate	Total Amount
			General Notes : All the works are to be carried out as per latest specifications of CPWD/MES/Indian Railways/State PWD, and relevant IS Codes unless otherwise specified in BOQ. Measurements of all the items shall be taken as per detailed specifications of the various items mentioned in CPWD specifications. In the absence of such specifications mode of Measurements as per IS 1200 with its latest revisions will be followed. Unless otherwise specified, the rates of various items will be for all heights, leads and lifts. It is deemed that tenderer has understood the intent of the item of work to be completed and cost(s) of item quoted, is worked out to include the cost of all labour & materials and to complete the item of work irrespective of completeness of the description.			
			Note: A) In case any specific method of measurement for any item is not mentioned, IS 1200 shall be followed for the purpose of measurement and certification. B) This BOQ shall be read in conjunction with Technical Specification.			
			General Notes: All levels mentioned in tender/GFC drawing are with respect to existing ground level at site or, for trenches and pits, the bottom of mass excavation, whichever deeper. At the time of handing over the site to the Contractor, if in case, any variation, discrepancy between Good For Construction(GFC)/tender drawings and existing site conditions is noticed, the same should be brought to the notice of Engineer-in Charge/ Architects/Consultants in writing.			
			Levels are to be taken before and after excavation and as directed by Engineer-in-charge for calculating the depth of excavation.			
			Rate shall include marking the areas to be excavated, setting up the reference datum bench mark, establishing interim and final excavation levels with appropriate survey instruments, carrying out excavation in the specified type of soil, inclusive of de-watering to keep the area clear from water ponding at all times to the required depth and profile . Rate shall include for breaking and removing old foundations with or without reinforcement, underground tanks, floor concrete, sewers, pipelines etc. and carting away the debris. Rate shall be inclusive of shoring, strutting, removal of slurry, dewatering, including stacking of good excavated earth anywhere within site premises and backfilling in layers of 300mm to achieve 95 % MDD as approved by Engineer in charge, include all other incidental charges. (Note: Working space and extra space for side slope soil stabilization will not be measured and paid for). Payments will be made only on the volume of earth excavated as per GFC drawings.			
			Contractor shall use the latest mechanical means of excavation suitable to achieve the required excavation level within the agreed time period. All such equipment mobilized on the site shall be in perfectly working condition, well maintained, ensuring no down time during the entire agreed working period. A list of all such equipment, manpower, machinery and the proposed infrastructure that the contractor is going to mobilize for the work shall be submitted to the Engineer in charge before start of work for his approval.			
			The final approved founding strata shall be left absolutely clean by removing loose, slushy soil, murrum and weathered rock with necessary tools & tackles, cleaning the surface by wire brush and carting away debris, dewatering to keep site dry at all times etc. all complete to the approval of Engineer in charge.			
			Contractor's rates shall include fees for all statutory sanction and royalties for any kind of disposal.			
			Quoted rate shall include for cost of materials, labour, loading and unloading charges, hire of machinery, tools & plants, shoring, strutting, dewatering, removal of slurry, fuel charges, transportation, scaffolding and all other incidental charges etc., with all leads and lifts as specified in respective items of work, complete and as directed by the Engineer-in-charge at all levels.			
			If the Excavation for foundation is done to a depth greater than that shown in the drawings or as required by the Engineer In- Charge, the excess depth shall be made good by the contractor at his own cost with the concrete of the mix used for levelling / bed concrete for foundations. No Payment shall be made to contractor for the cost of Additional Concrete required to fill up the extra depth of excavation in such cases.			
	1		Pile Work			0
	2		Earth work			

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2.001	MR 2.001	3110	Supplying and Filling the approved good quality earth brought from outside the premises in layers not exceeding 20 cm in depth, breaking clods, watering, rolling each layer with 1/2 tonne roller, or wooden or steel rammers, and rolling every 3rd and top-most layer with power roller of minimum 8 tonnes and dressing up including all lead and lift.	Cum	874.50	27,19,696.71
2.002	MR 2.002	500	Carriage of Lime, Murrum, Building rubbish By Mechanical Transport- Disposal up to 5 Km. lead outside campus premises	Cum	278.58	1,39,291
2.003	MR 2.003	21988	Providing and Laying Separation Membrane of impermeable plastic sheeting 125 micron thick.	Sqm	26.75	5,88,214
2.004	MR 2.004	63	Providing & Laying HDPE made empty cement bags and stitching these in periphery so as to make a flexible barricade up to an height of 4 Metre above ground level and erecting with 50 to 60 mm diameter bamboos in frame work of 2400 mm X 1330 mm size including embedding of 600 mm lower part of vertical bamboos in ground as per direction of Engineer in charge	Sqm	226.05	14,128.29
2.005	MR 2.005	3	Providing & Laying HDPE made empty cement bags and filling with clod free available excavated earth and stitching the bags manually and placing these filled up bags in form of toe wall to protect the stacked earth as per direction of Engineer-in-charge.(Volume of filled up bags shall be measured for payment purposes)	Cum	1,782.45	5,347.34
2.006	MR 2.006	30	Providing & Laying barricading with three rows of enamel painted G.I. Sheets of about 750 mm wide nailed or bolted with wooden poles 80 mm to 100 mm dia spaced 2.4 meter centre to centre. The poles will be embedded in mobile iron pedestal rings suitably framed for giving stable support as per direction of the Engineer-in-charge. All management (including watch and ward) of barricades shall be the full responsibility of the contractor. The barricades shall be removed only after completion of the work or part of the work. After completion of work barricading will be contractor's property	Sqm	248.67	7,460.17
2.007	MR 2.007	9	Removing from one location, a tree of girth not more than 60 Cms. Including the roots by excavating earth around the root, lifting the tree along with earth around the roots by suitable equipment, transporting the tree from old location to the new location, making a pit of required diameter and depth in earth at new location, and replanting the tree in to the pit, back filling the soil around the roots of the tree, including necessary manure, watering the tree for required time till the roots gets hold in the earth at new location complete as directed by Engineer In charge.	Nos	1,004.32	9,038.88
			Subtotal of Earth Work			34,83,176.92
	3		Concrete work			
3.001	MR 3.001	211	Providing and laying in position Plum cement concrete of specified grade 1:5:10 (1 cement : 5 coarse sand : 10 graded stone aggregate 40 mm nominal size) using plums of 160 mm and more of reasonable size up to a maximum of 20% by volume of Concrete excluding the cost of cantering and shuttering. The Plums should be evenly distributed in concrete and minimum space between two plums should be not less than 200 mm and the plums should not be closure than 150 mm from the surface.	Cum	4,411.80	9,31,992.64
			Subtotal of Concrete Work			9,31,992.64
	4		Reinforced Cement Concrete work			
4.001	MR 4.001	1480	(L) : Extra for Shuttering (over DSR items Nos. 5.9.2, 5.9.3, 5.9.4, 5.9.5, & 5.9.6)in sloping slabs, beams, columns and walls for chhatris, gopurams, etc. including the edge beams etc. at all levels.	Sqm	259.01	3,83,328.60
4.002	MR 4.002	2214	Extra for staging for additional height in shuttering where ever required with adequate bracing, propping etc., including cost of de-shuttering and decentring at all levels over a height of 3.6 m, for every additional height of 3.6 m or part thereof for Suspended roofs, sloping slabs, slabs in curved shape, landing, beams and balconies etc. (only Plan area of staging to be measured and paid for. Staging for vertical walls, columns pardies etc. will not be paid for in any case.)	Sqm	362.61	8,02,959
4.003	MR 4.003	5208	Extra Labour for leaving hollow spaces in Burnt brick Masonry/CSE block masonry for RCC Vertical mullians & horizontal transoms (ties) of required size, providing reinforcement bar for mullians & transoms (ties) as per structural drawing corners bars and concreting the same with M25 concrete grade concrete including removal of mortar, dust, etc. from the hollow spaces before doing the concreting complete as per drawing & instruction of engineer- in- charge. Reinforcement concrete & Burnt brick Masonry/CSE block masonry will be paid separately in their respective items.	Metre	228.89	11,92,080

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4.004	MR 4.004	15	Providing & fixing premoulded compressible filler board of approved make conforming to as per manufacturer specification, including cost of primer in expansion joints as per drawing, specification and sample approved and as directed by engineer in charge.	Cum	81,225.48	12,11,518.68
4.005	MR 4.005	3891	Providing and laying polysulphide sealant for expansion joints of approved make Including surface preparation, applying primer, backer rod, sealant, curing make as per drawing, manufacturer specification to give water tightness & as directed by engineer in charge.	Sq.Cm x Rmt.	140.42	5,46,391.26
4.006	MR 4.006	130	Providing and fixing expansion joint flexible strip with polyurethane sealant of approved make flush mounted expansion /seismic joint system with +/-25mm joint movement design as per the joint manufacturer specification complete as per drawing, specification and sample approved and as directed by engineer in charge.	Sqm	15,418.50	19,99,779.45
4.007	MR 4.007	126	Making core cutting for fixing pipe 50 mm to 100 mm dia in RCC slab/wall/beam up to 350 mm wide (length of Core cutting) for drainage line fittings as per detailed drawing and as directed by engineer in charge.	Nos	1,556.79	1,96,155.22
4.008	MR 4.008	186	Making core cutting for fixing pipe 150 mm dia in RCC slab/wall/beam up to 350 mm wide (length of Core cutting) for drainage line fittings as per detailed drawing and as directed by engineer in charge.	Nos	1,895.22	3,52,510.84
4.009	MR 4.009	66	Making core cutting for fixing pipe 230 mm dia in RCC slab/wall/beam up to 350 mm wide (Length of Core cutting) for drainage line fittings as per detailed drawing and as directed by engineer in charge.	Nos	2,978.20	1,96,561.34
			Subtotal of Reinforced Cement Concrete Work			68,81,284.49
	5		Brick work			
5.001	MR 5.001	703	Extra rate over DSR item no. 6.1.2 for Brick work with burnt clay (non modular) bricks of 230 mm x 110 mm x 50 mm size instead of size 230 mm x 110 mm x 70 mm of class designation 7.5 in foundation and plinth in: Cement mortar 1:6 (1 cement : 6 coarse sand)	Cum	2,019.95	14,20,025
5.002	MR 5.002	879	Extra rate over DSR item no. 6.4.2 for Brick work with burnt clay (non modular) bricks of 230 mm x 110 mm x 50 mm size instead of size 230 mm x 110 mm x 70 mm and class designation 7.5 in superstructure above plinth level for all levels in all shapes and sizes in : Cement mortar 1:6 (1 cement : 6 coarse sand)	Cum	2,194.64	19,29,089.05
5.003	MR 5.003	14453574	Manufacturing the Compressed Stabilized Earth (CSE) Blocks of size 230 mm x 110 mm x 100 mm, from the selected soil available from excavation at site within premises including providing and installing, operating and maintaining necessary machinery by the contractor at his own cost for the production of CSE blocks. Rates includes required quantity of Selected soil for the production of CSE blocks will be excavated from the site from the Water bodies and transported to the location of CSE blocks manufacturing facility by the contractor. The contractor shall provide necessary Cement, sand and Surkhi etc. at his cost including the supply, transportation to site, royalties etc. The proportion of materials will be as follows (1) Soil/Earth 30 to 40% by weight (2) Sand 30 to 40% by weight (3) Finely ground surkhi which is obtained by gridding well burnt red brick bats available as wastage from red bricks manufacturing kilns, 30 to 40% (4) Cement 8 to 10% by weight but in no case less than 8%. (5) Hydrated Lime 5% The blocks must be cured with moist air or by covering with water soaked gunny bags over the stake of earth blocks for four weeks. The Blocks are allowed to dry for at least 10 days under the shade. The Cured earth blocks are to be staked neatly at the storage yard which will be covered with Ploythene sheets to retain the moisture inside the Earth blocks. Compressive strength of the CSEBs manufactured will be minimum	Nos	10.98	15,86,56,050.12
5.004	MR 5.004	40529	Brick work with Compressed Stabilized Earth (CSE) Blocks of class designation 7.5 in superstructure above plinth level up to floor V level in all shapes and sizes in : Cement mortar 1:4 (1 cement : 4 coarse sand) Rates to include transportation of Compressed Earth blocks from storage yard to the site of work. (Supply of CSE block will be paid separately in relevant items)	Cum	3,632.81	14,72,33,973.74
5.005	MR 5.005	5336	Half brick masonry with Compressed Stabilized Earth (CSE) Blocks of class designation 7.5 in superstructure above plinth level up to floor V level in: Cement mortar 1:4 (1 cement :4 coarse sand) Rates to include transportation of Compressed Earth blocks from storage yard to the site of work. (Supply of CSE block will be paid separately in relevant items)	Sqm	424.93	22,67,427
5.006	MR 5.006	15877	Extra rates over DSR item no. 6.4.2 for providing exposed masonry with common burnt clay bricks of size 230 mm x 110 mm x 70 mm including raking horizontal and vertical joints 10 mm wide 12 mm deep to receive pointing complete. The Exposed surface area only of the Brick work will be measured for payment.	Sqm	81.86	12,99,644

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5.007	MR 5.007	4693	Extra rates over MR item no. 5.002 for providing exposed masonry work for Brick masonry with common burnt clay bricks of size 230 mm x 110 mm x 50 mm instead of size 230 mm x 110 mm x 70 mm , including raking horizontal and vertical joints 10 mm wide 12 mm deep to receive pointing complete in cement mortar 1:4 (1 cement : 4 coarse sand). The Exposed surface area only of the Brick work will be measured for payment.	Sqm	13.46	63,179.01
5.008	MR 5.008	60647	Extra rates over MR item no. 5.004 for providing exposed masonry with Compressed Stabilized Earth (CSE) Blocks including raking horizontal and vertical joints 10 mm wide 12 mm deep to receive pointing complete. The Exposed surface area only of the Brick work will be measured for payment.	Sqm	67.50	40,93,567.90
			Subtotal of Brick Work			31,69,62,956.37
	6		Stone work			
6.001	MR 6.001	781	Providing and fixing wet cladding in (wall lining) any shape at all heights with 18 to 20 mm thick gang saw cut stone with (machine cut edges) of uniform colour and size, backing filled with a grout of average 12 mm thick cement mortar 1:3 (1 cement : 3 coarse sand) mixed with adhesive in proportion as per manufacture's specification, including pointing in white cement mortar 1:2 (1 white cement : 2 stone dust) with an admixture of pigment matching the stone shade at all levels including cutting, making recesses in stone slab, drilling holes, rubbing, polishing, curing, and scaffolding etc. complete in the required pattern as per drawing and as directed by engineer in charge. (a) : Red Sandstone	Sqm	2,647.62	20,67,792.13
6.002	MR 6.002	10	(b) : Granite stone	Sqm	5,109.39	51,093.92
6.003	MR 6.003	4001	Providing and fixing Jali (Grill) in the openings in Brick/RCC wall. Jali shall be made out of Red Mandana stone of size up to 320 mm x 150 mm x 30 mm thick, Sand Blasted on all the surfaces, two rows of 25 mm NB MS pipes (heavy class with Minimum wall thickness 2.6 mm) and 40 mm NB x 48 mm long Ms pipe sleeves. Jali shall be fixed as per drawings and as directed by the Engineer in charge complete. Set of 2 nos. M.S. Pipes of 25 mm NB shall be fixed horizontally, on vertical jamb of the opening, side by side at 100 mm centre to centre, from one end of opening to the other end with suitable holdfasts or anchor fasteners. Such set of two pipes shall be fixed from top line of opening to bottom line of opening, at 330 mm centre to centre vertically. Stone pieces shall be placed perpendicular to these pipes, vertically between two sets of pipes, in such a way that 320 mm x 30 mm face of the stone shall be visible in elevation. Stone should have two nos. round shaped grooves on each face at top and bottom faces for resting the stone between 25 mm NB MS pipes as shown in the drawing. 40 mm NB x 48 mm long MS pipe sleeves shall slip over the 25 mm NB pipes to act as spacers between two stones, which are vertically resting on the pipes. Horizontal clear space between two adjacent stones in the same level	Sqm	6,967.87	2,78,78,449.07
			Subtotal of Stone Work			2,99,97,335.11
	7		Marble & Granite Work			
7.001	MR 7.001	40	Providing and laying Mirror polished Granite stone flooring in required design and patterns, in linear as well as curvilinear portions of the building all complete as per the architectural drawings with 18 mm thick stone slab over 20 mm (average) thick base of cement mortar 1:4 (1 cement : 4 coarse sand) laid and jointed with cement slurry and pointing with white cement slurry admixed with pigment of matching shade including rubbing, curing and polishing etc. all complete as specified and as directed by the Engineer in- Charge. (a) : Granite Stone of approved shade	Sqm	4,411.14	1,76,445.80
7.002	MR 7.002	60	Providing and fixing 18mm thick gang saw cut, mirror polished, pre moulded and pre polished, machine cut stone for tread and risers of steps, dedo, jambs, lintels, partition, seat, landing, parapet top , shelves, chajja , sill, divider, and similar locations of required size, machine cut edges ,approved shade, colour and texture laid over 20mm thick base cement mortar 1:3(1 cement : 3 coarse sand), joints treated with white cement, mixed with matching pigment, epoxy touch ups, including rubbing, curing, moulding and polishing edges give high gloss finish etc. complete at all levels as per detailed drawing and as directed by engineer in charge. (a) : Granite Stone of approved shade	Sqm	5,115.36	3,06,921.54
			Subtotal of Marble & Granite Work			4,83,367.33
	8		Wood & PVC Work			

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8.001	MR 8.001	150	Providing wood work in frames of panelled shutters for doors, window , clerestory windows and other similar frames, and fixed to the Existing wooden frames with approved make Hinges as per detailed drawings and as directed by the Engineer - in - Charge. The various components of Panelled shutter like vertical stiles, Top, Bottom & lock rails and intermediate transoms & mullions, in the shutter shall be measured, only in volume of teakwood used and shall be paid for. The rates shall include all the required materials like, nails, screws, wooden nails, Adhesive Glue etc. and labour for preparation of shutter frame and fixing the same with Door frames complete. Approved quality Hinges, Wooden/ Glass/Ply wood panels including the necessary Teak wood beading , nails & screws etc. for fixing hinges/panels shall be paid under relevant items as the case may be. (a) : Second class teak wood	Cum	1,50,674.75	2,26,01,211.80		
8.002	MR 8.002	484	(b) : Marine Ply wood 19 mm thick	Sqm	3,057.32	14,79,743.43		
8.003	MR 8.003	50	Providing and fixing a pair of Stainless Steel Pivots for making the stone jali openable by fixing Pivot by making necessary recesses in stone jali and RCC/stone sill & Lintel and fixing the pivot with necessary S.S. Screws etc. complete as directed by Engineer In Charge.	Sqm	2,065.14	1,03,257.23		
8.004	MR 8.004	181	Providing and fixing 5.0 mm thick toughened glass fixed with wooden bedding including the cost of wooden beadings ,glass and necessary cutting finishing for Partitions, doors, windows etc. complete as per drawing and as directed by Engineer-in-charge.	Sqm	2,846.22	5,15,166.06		
8.005	MR 8.005	548	Extra for providing frosted glass panes 5.0 mm thick instead of ordinary float glass panes 5.0 mm thick in doors, windows and clerestory window shutters. (Area of opening for glass panes excluding portion inside rebate shall be measured).	Sqm	1,150.24	6,30,330.22		
8.006	MR 8.006	37	Extra rate over DSR Item no 9.7.7.2 for single glazing 5.0 mm thick clear cosmos (ET 125) of approved make having properties like light transmission 28%,external reflection 28%, internal reflection 9%, 28%, solar factor 0.3, shading coefficient 0.34, U value (W/Sqm-k) 3.9 Light instead of 5.0 mm thick sheet float glass as per drawing and as directed by Engineer-in-Charge.	Sqm	1,465.74	54,232.30		
8.007	MR 8.007	230	Providing & fixing wooden patta 130 mm wide made from 18 mm thick marine plywood conforming to IS: 710 with each side 5 mm thick teakwood beading and fixed to supporting second class teakwood patti 35X 35 mm which is fixed to wall as per drawing and as directed by engineer- in- charge	Metre	892.19	2,05,204.29		
8.008	MR 8.008	41	Providing wooden louvers of Second class teak wood 10 mm thick and up to 150 mm wide as required including fixing at 50 mm center to centre distance at required location in frames/shutters of door/windows including cutting finishing and beading as per drawing and as directed by engineer-in-charge. Frames will be paid separately in relevant items. Area of Lovers in elevation Excluding the frame will be measured and paid for.	Sqm	3,398.56	1,39,340.83		
8.009	MR 8.009	189	Providing and fixing exterior grade non asbestos cement fibre board of approved make with necessary s.s. screws etc. for the covering of Pipe shafts, Cable shafts etc. complete in pattern with grooves as per drawing and as directed by engineer in-charge. Framing will be paid in relevant items. (a) : 6 mm thick Cement Boards	Sqm	1,007.79	1,90,573.20		
8.010	MR 8.010	1702	(b) : 8 mm thick Cement Boards	Sqm	1,236.30	21,04,055.56		
8.011	MR 8.011	330	Providing & Fixing Zinc Material Combination Finish Door Safety Chain, minimum weight 190 grm. with necessary nickel Plated screws for doors as per drawing and as directed by Engineer-in-charge.	Nos	325.55	1,07,430.98		
8.012	MR 8.012	2557	Providing & Fixing S.S. 316 Grade C Shaped Handles in Satin Finish, 10 mm dia and centre to centre minimum 150 mm size, minimum weight 140 grm with necessary screws etc. complete of approved make as per drawing and as directed by engineer-in-charge.	Nos	133.00	3,40,072.53		
8.013	MR 8.013	33276	Providing & Fixing S.S. 316 Grade Fire resistance BSEN 1634:1:2000 Certified & Mechanically tested BSEN 1935:2002 Satin Finish S.S. 316 Grade 4 ball bearings Hinges approximate size 102mm X 76mm X 3 mm minimum Weight 260 grm of approved make with AISI 316 Grade ball Bearing S.S. Pin, Cap, and with necessary S.S. Self Tapping Phillips Cross Head Screws etc. complete as specified as per drawing and as directed by engineer-in -charge.	Nos	542.88	1,80,65,014.33		

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8.014	MR 8.014	17556	Providing & Fixing S.S. 316 Grade Satin Finish Fire resistance BSEN 1634:1:2000 Certified & Mechanically tested BSEN 1935:2002 Hinges without bearings approximate size 76mm X 65mm X 2 mm minimum weight 100 grm of approved make with AISI 316 Grade S.S. Pin, Cap, and with necessary S.S. Self Tapping Phillips Cross Head Screws etc. complete as specified as per drawing and as directed by engineer-in -charge.	Nos	303.85	53,34,468.89
8.015	MR 8.015	10174	Providing & Fixing S.S. 304 Grade Stainless Steel Satin Finish Round Tower bolt of overall length (excluding Bracket) 300 mm and inner bolt of dia meter 12mm and outer barrel dia meter 16 mm, minimum weight 430 grm. of approved make with necessary Nickel Plated Screws complete as per specified as per drawing and directed by Engineer in charge.	Nos	655.76	66,71,695.54
8.016	MR 8.016	17140	Providing & Fixing S.S. 304 Grade Stainless Steel Satin Finish Round Tower bolt of overall length (excluding Bracket) 100 mm and inner bolt of dia meter 12mm and outer barrel dia meter 16 mm, minimum weight 150 grm of approved make with necessary nickel Plated Screws complete as per specified as per drawing and directed by Engineer in charge.	Nos	255.61	43,81,120.72
8.017	MR 8.017	8578	Providing & Fixing AISI S.S. 316 Grade Solid Window Casement stay/adjustor with minimum weight 280 grm of size diameter 14 mm, lenght 200 mm with necessary fixing screws as specified as per drawing & as directed by engineer-in-charge.	Nos	728.36	62,47,834.91
8.018	MR 8.018	24	Providing & Fixing Satin Finish Brass Parliamentary Hinges with the Size of 100 X 75 X 4 mm of approved make with necessary fixing screws as specified as per drawing & as directed by engineer-in-charge.	Nos	872.21	20,933.14
8.019	MR 8.019	5295	Providing & Fixing Fire resistance BSEN 1634:1:2000 Certified & mechanically tested BSEN 1906:2010 Pair of AISI S.S. 316 Grade Satin Finish hollow Pipe or solid design Mortise Handle with the minimum weight 620 grm key hole for Mortise Pin Cylinder, high grade brass bushing for extra fixing strength for intensive use of door with back to back fixing screws system of approved make with both side active mortise handle and spindle, High Quality Stainless Steel Wood Screws (8 PCS.) for minimum door thickness 30 mm as per drawing and as directed by engineer in charge. The Inner and Outer Rose of Mortise handle and Escutcheons must be of AISI 316 grade only.	Pair	1,850.37	97,97,709.15
8.020	MR 8.020	386	Providing & Fixing Fire resistance BSEN 1634:1:2000 Certified & mechanically tested BSEN 1906:2010 Pair of AISI S.S. 316 Grade Satin Finish hollow Pipe or solid design Mortise Handle with the minimum weight 930 grm with S.S. 316 Grade euro profile escutcheons key hole for Mortise Pin Cylinder, high grade brass bushing for extra fixing strength for intensive use of door with back to back fixing screws system. of approved make with both side active mortise handle and spindle, High Quality Stainless Steel Wood Screws (8 PCS.) for minimum door thickness 30 mm as per drawing and as directed by engineer in charge. The Inner and Outer Rose of Mortise handle and Escutcheons must be of AISI 316 grade only.	Pair	2,476.41	9,55,894.26
8.021	MR 8.021	958	Providing & Fixing Satin Finish Double Door Lock body , 26 mm brass latch. 52 mm lock with Back Set centre of approximate size 85 X 45 mm, of approved make, minimum Weight 0.880 grm suitable for minimum 30 mm thick Double Door Shutter with necessary fixing screw as specified as per drawing and as per directed by engineer in charge.	Nos	1,589.53	15,22,766.54
8.022	MR 8.022	2298	Providing & Fixing Fire resistance BSEN 1634:1:2000 Certified Satin Finish Mortise Lock body approximate size of back set 45 mm X 85 mm, with 52 mm Lock and 26 mm brass latch , Stainless steel main & Strike plate & including back to back fixing feature suitable for minimum door thickness 30 mm Single door shutter with necessary fixing screw as per specified as per directed by engineer in charge.	Nos	788.70	18,12,423.51
8.023	MR 8.023	1472	Providing & Fixing Fire resistance BSEN 1634:1:2000 Certified Satin Finish Mortise Latch body with back set approximate size of 45 mm, Stainless Steel main & Strike Plate of approved make suitable for minimum 30 mm thick Single door Shutter with necessary fixing screw as specified as per drawing and as directed by engineer in charge.	Nos	608.29	8,95,405.14
8.024	MR 8.024	2134	Providing & Fixing Satin Finish 6 pin Mechanism, high Quality brass body Mortise Pin Cylinder with 5 high accuracy Computerized Dotted keys of approved make one side key & one side knob suitable for minimum door thickness 30 mm with necessary Fixing Screw as specified and as per drawing and as per directed by engineer in charge.	Nos	781.43	16,67,564.24

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8.025	MR 8.025	164	Providing & Fixing Fire resistance BSEN 1634:1:2000 Certified Satin Finish Secure Standard 5 pin Mechanism Mortise Pin Cylinder with both Side Keys, high accuracy Brass keys of approved make suitable for minimum door thickness 30 mm with necessary fixing screw as per specified and as per drawing and as per directed by engineer in charge.	Nos	660.58	1,08,335.73
8.026	MR 8.026	958	Providing & Fixing Fire resistance BSEN 1634:1:2000 Certified Satin Finish Secure Standard 5 pin Mechanism half Mortise Pin Cylinder with high accuracy Brass keys of approved make one side key suitable for minimum door thickness 30 mm with necessary fixing screw as per specified and as per drawing and as per directed by engineer in charge.	Nos	576.92	5,52,692.55
8.027	MR 8.027	1472	Providing & Fixing high Quality Zinc Material Satin Finish baby latch/Indicator Bolt inner Only with the size 87 mm of approved make with necessary SS Screw etc. complete as specified as drawing as directed by engineer-in- charge	Nos	429.57	6,32,325
8.028	MR 8.028	494	Providing & Fixing Satin Finish S.S. Door Magnet length of 75 mm of approved make, minimum Weight 150 grm with necessary nickel plated screw complete, as specified, as per drawing and as directed by engineer in charge.	Nos	206.46	1,01,991
8.029	MR 8.029	1758	Providing & Fixing high Quality Zinc Material Door Stopper length of 150 mm including Rubber of approved make minimum Weight 260 grm with necessary Screws etc. complete as specified, as per drawing as directed by engineer-in-charge.	Nos	407.88	7,17,054.59
8.030	MR 8.030	8562	Providing & Fixing S.S. 316 Grade C Shaped Handles in Satin Finish, 10 mm dia and centre to centre minimum 100 mm size, minimum weight 94 grm with necessary screws etc. complete of approved make as per drawing and as directed by engineer-in-charge.	Nos	133.00	11,38,717.65
8.031	MR 8.031	3444	Providing & Fixing AISI S.S. 316 Grade Satin Finish Wall/Floor mounted Door Stop with the length of 75 mm to 100 mm including Rubber, minimum Weight 150 grm of approved make with necessary SS screws etc. complete as specified as per drawing and as directed by engineer-in-charge.	Nos	407.34	14,02,884.47
8.032	MR 8.032	330	Providing & Fixing Zinc Material Door Eye Viewer of Dia. 36mm approved make with wide angle vision and fixing accessories as specified as per drawing as directed by engineer-in-charge.	Nos	200.72	66,236
8.033	MR 8.033	7	Providing & Fixing Brass finish Special Shaped Handles of special design as per drawing in matt Finish made out of 5 mm thick brass plate and having approximate weight 5 kg per pair of handles with necessary brass screws etc. complete of approved make as per drawing and as directed by engineer-in-charge.	Pair	12,094.53	84,662
8.034	MR 8.034	36	Supply and carpentry of chemically seasoned 2nd class teak wood for creation of trellis & pergola rafters, columns, seat backs, railing tops, playground equipment parts like climbing wall steps, seats of see-saws, swings, etc. to be installed in exterior areas complete with all material, labour, equipment and accessories like screws, nuts, bolts, adhesive, etc.	Cum	1,50,145.65	54,05,243.32
			Subtotal of Wood & PVC Work			9,60,53,590.96
	9		Steel work			
9.001	MR 9.001	15658	Steel work in built up tubular (round, square or rectangular hollow hot finished welded type tubes etc.) for supporting frame work of Partitions with fixed glazing/fixed wooden/ plywood panels/ openable glazed doors/windows etc. all as per the detailed drawings and instructions of Engineer In charge , including cutting, hoisting, fixing in position and applying a priming coat of approved steel primer, including welding and bolted with special shaped washers etc. complete. Steel sections if required for Architectural aesthetic looks, may be covered with wooden members as per detailed design drawings. Weight of Steel sections only will be measured and paid for. Glazing, wooden/ply wood panels, shutters etc. will be paid separately under relevant items.	Kg	150.07	23,49,802.60

Name of Work :- Development Of Permanent Campus Of Nu Rajgir.								
Subject :- Schedule-B (MR Items)								
Sr.no	MR Items	Total Quantity	Description	Unit	Rate	Total Amount		
9.002	MR 9.002	17540	Providing and fixing stainless steel AISI 316 Grade Stainless Steel Knock Down railing system of approved make with satin finish and loading tested as per International load Testing Criteria with EXOVA Certification (Without any welding, Fabrication and Buffing on site) made of Hollow tubes, channels, plates , special glass holding fixtures etc., including welding, grinding, buffing, polishing and making curvature (wherever required) and fitting the same with necessary stainless steel nuts and bolts complete, on the top of the floor or the side of waist slab with suitable arrangement as per drawing and as directed by engineer in charge. The balustrade would be fixed onto floor/waist slab with casted base plate of S.S 316 with High Strength 2 NOS Anchor fasteners and whenever required, joints to be filled with bushings for extra strength. (for payment purpose only weight of stainless steel members shall be considered excluding fixing accessories such as nuts, bolts, fasteners etc.).	Kg	1,191.28	2,08,95,066.28		
9.003	MR 9.003	3563	Providing and fixing 12 mm thick toughened glass with chemical itching/providing and fixing of translucent polyester film on glass to give it a look of Frosted glass in the design as per detailed drawing to be fixed with Stainless steel railing in stairs, passages etc. with necessary length and diameter and designs stainless steel nuts etc. including making required size holes for bolts etc. for fixing the glass sheet with railing members complete. Sample of the railing will be prepared by the contractor and got approved by the Architect Before taking up the job at full scale.	Sqm	3,981.89	1,41,87,485.21		
			Subtotal of Steel Work			3,74,32,354.10		
	10		Flooring work					
10.001	MR 10.001	10963	Extra rate over DSR item no. 11.26.1 for using Red Mandana stone slabs in flooring, in place of Kota stone slabs	Sqm	335.45	36,77,723.46		
10.002	MR 10.002	121	Extra rate over DSR item No. 11.26.1 for using Brown Bundi stone slabs in flooring, in place of Kota stone slabs	Sqm	1,126.75	1,36,336.29		
10.003	MR 10.003	3120	Extra rate over DSR item 11.27 for using Sand stone slabs in risers of steps, skirting, dado and pillars, in place of Kotah stone slabs	Sqm	634.78	19,80,315.67		
10.004	MR 10.004	55	Extra rate over DSR item 11.27 for using Brown Bundi stone slabs in risers of steps, skirting, dado and pillars in place of Kota stone slabs	Sqm	1,972.05	1,08,462.68		
10.005	MR 10.005	5861	Kota stone slab 25 mm thick approved colour, shade & texture with machine cut edges in Kitchen platforms, vanity counters, facia, sills, jams, lintels, partition, seat, landing, parapet top , shelves, chajja and similar locations of required size and in full length, over 20 mm (average) thick cement mortar 1:3 (1 cement 3 coarse sand) laid to line and level and jointed with grey cement slurry mixed with pigment to match the shade of the slabs, including rubbing and polishing complete as per drawing and as directed by engineer in charge.	Sqm	2,139.33	1,25,38,594.68		
10.006	MR 10.006	4426	Extra rate over MR item no. 10.005 for using Red Mandana stone slabs in Kitchen platforms, vanity counters, facia, sills, jams, lintels, partition, seat, landing, parapet top , shelves, chajja and similar locations, in place of Kota stone slabs	Sqm	577.91	25,57,543.59		
10.007	MR 10.007	124	Extra rate over MR item no. 10.005 for using Brown Bundi stone slabs in Kitchen platforms, vanity counters, facia, sills, jams, lintels, partition, seat, landing, parapet top , shelves, chajja and similar locations, in place of Kotah stone slabs	Sqm	1,373.58	1,70,324.51		
10.008	MR 10.008	18228	Rough Kota stone slab 25 mm thick approved colour, shade & texture in flooring over 20 mm (average) thick over base of cement mortar 1 : 4 (1 cement : 4 coarse sand) laid to line and level and jointed with grey cement slurry mixed with pigment to match the shade of the slab including cleaning complete as directed by the Engineer-in-charge.	Sqm	1,161.92	2,11,79,721.57		
10.009	MR 10.009	16316	Extra rate over MR item no. 10.008 for using Rough Red Mandana stone slab 25 mm thick approved colour, shade & texture in flooring over 20 mm (average) thick over base of cement mortar 1 : 4 (1 cement : 4 coarse sand) laid to line and level and jointed with grey cement slurry mixed with pigment to match the shade of the slab including cleaning in place of Rough lota stone slabs, complete as directed by the Engineer-in-charge.	Sqm	179.03	29,21,062.63		

Name of Work :- Development Of Permanent Campus Of Nu Rajgir.						
Subject :- Schedule-B (MR Items)						
Sr.no	MR Items	Total Quantity	Description	Unit	Rate	Total Amount
10.010	MR 10.010	125	Rough Kota stone slabs 20 mm thick of approved colour, shade & texture in risers of steps, skirting, dado and pillars similar locations of required size with machine cut edges over 12 mm (average) thick cement mortar 1:3 (1 cement 3 coarse sand) laid to line and level and jointed with grey cement slurry mixed with pigment to match the shade of the slabs, including nosing, rubbing and polishing of Machine cut edges, cleaning complete as per drawing and as directed by engineer in charge.	Sqm	1,620.52	2,02,565.57
10.011	MR 10.011	88	Rough Kota stone slab 25 mm thick approved colour, shade & texture with machine cut edges in Kitchen platforms, vanity counters, facia, sills, jams, lintels, partition, seat, landing, parapet top, shelves, chajja and similar locations of required size and in full length, over 20 mm (average) thick cement mortar 1:3 (1 cement 3 coarse sand) laid to line and level and jointed with grey cement slurry mixed with pigment to match the shade of the slabs, including rubbing and polishing complete as per drawing and as directed by engineer in charge.	Sqm	2,113.10	1,84,895.84
10.012	MR 10.012	807	Extra for River-washed finish polishing on marble/Granite/stone where ever required to give rough finish complete as per drawing and as directed by engineer in charge.	Sqm	344.30	2,77,849.80
10.013	MR 10.013	4840	Extra for Sand blasted finish/lather finish polishing on marble/Granite/stone where ever required to give rough finish complete as per drawing and as directed by engineer in charge.	Sqm	425.87	20,61,189.35
10.014	MR 10.014	391	Extra for other side finish polishing on marble work/Granite work/stone work where ever required to give both side polished finish complete.	Sqm	161.42	63,116.85
10.015	MR 10.015	909	Extra for Kota stone/ Red Mandana/ Sand Stone in treads and risers of steps for using single stone of length of 1.05 metre to 1.50 metre in one pease	Sqm	145.50	1,32,259.70
10.016	MR 10.016	4623	Extra for providing 3 nos. grooves of size 5 mm x 5 mm in the treads of steps as per detailed drawings to make the surface of treads non slippery.	Meter	37.34	1,72,639.31
10.017	MR 10.017	186	Extra over DSR item no. 11.53 for providing and fixing 25 mm x25 x4 mm or 50 mm x 50 x4 mm Glass Mosaic /Shon tiles in place of 20 mm x 20 mm x 4mm glass mosaic tiles as per detailed Architectural Design pattern and shade of tiles.	Sqm	22.87	4,252.91
10.018	MR 10.018	11592	Providing and laying Terracotta colored vitrified floor tiles of Endura Make or equivalent in different sizes (having thickness 12 mm to 15 mm as specified by the manufacturer) with water absorption less than 0.08% and conforming to IS : 15622, of approved make, in all colours and shades, laid on 20mm thick cement mortar 1:4 (1 cement : 4 coarse sand), including grouting the joints with white cement and matching pigments etc., complete. (a) : 300x300 mm	Sqm	1,641.02	1,90,22,651.53
10.019	MR 10.019	1582	Providing and laying Terracotta colored Vitrified tiles of Endura make or equivalent in different sizes (having thickness 12 mm to 15 mm as specified by the manufacturer), with water absorption less than 0.08% and conforming to IS: 15622, of approved colours and shade, in skirting, tread & riser of steps, dado and pillar over 12 mm thick bed of cement mortar 1:3 (1 cement: 3 coarse sand), including grouting the joint with white cement & matching pigments etc. complete as per drawing and as directed by engineer in charge. (a) : 300x300 mm	Sqm	1,667.48	26,37,955.97
10.020	MR 10.020	50	Providing and laying Glazed/Mat finished Terracotta clay tiles of approved make in flooring in different sizes (having thickness 12 mm to 15 mm as specified by the manufacturer) with water absorption less than 1%, in all colours and shades, laid on 20mm thick cement mortar 1:4 (1 cement : 4 coarse sand), including grouting the joints with white cement and matching pigments etc., complete. (a) 300x300 mm	Sqm	4,339.88	2,16,993.95
10.021	MR 10.021	50	(b) 200x200 mm	Sqm	4,055.24	2,02,762.18
10.022	MR 10.022	28	Providing and laying Glazed/Mat finished Terracotta clay tiles of approved make in skirting, tread & riser of steps, dado and pillar in different sizes (having thickness 12 mm to 15 mm as specified by the manufacturer), with water absorption less than 0.08% , of approved colours and shade, in skirting, tread & riser of steps, dado and pillar over 12 mm thick bed of cement mortar 1:3 (1 cement: 3 coarse sand), including grouting the joint with white cement & matching pigments etc. complete as per drawing and as directed by engineer in charge. (a) 300x300 mm	Sqm	4,384.28	1,22,759.94
10.023	MR 10.023	28	(b) 200x200 mm	Sqm	4,096.02	1,14,688.44

Name of Work :- Development Of Permanent Campus Of Nu Rajgir.						
Subject :- Schedule-B (MR Items)						
Sr.no	MR Items	Total Quantity	Description	Unit	Rate	Total Amount
10.024	MR 10.024	50	Providing and laying Terracotta clay tiles of approved make in flooring 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. for terraces & exteriors areas complete. , as per architectural drawing as directed by engineer-in-charge. (a) 300x300 mm	Sqm	1,285.87	64,293.58
10.025	MR 10.025	50	Providing and laying 40 mm thick Terracotta clay paver of approved size, design & shape, laid in required colour and pattern over and including 50 mm thick compacted bed of coarse sand, filling the joints with fine sand etc. all complete as per the direction of Engineer-in-charge. (a) : 200x200 mm	Sqm	1,461.95	73,097.26
10.026	MR 10.026	30	(b) : 100x200 mm	Sqm	1,496.04	44,881.30
10.027	MR 10.027	20	(c) : 100x100 mm	Sqm	1,550.90	31,018.07
10.028	MR 10.028	70	Providing and laying 50 mm thick sand blasted Red Mandana stone pavers of approved size, design & shape, laid in required pattern over and including 50 mm thick compacted bed of coarse sand, filling the joints with fine sand etc. all complete as per the direction of Engineer-in-charge. (a) : 200x200 mm	Sqm	1,949.73	1,36,480.81
10.029	MR 10.029	30	(b) : 100x100 mm	Sqm	1,983.82	59,514.72
10.030	MR 10.030	8703	Providing and laying 60mm-70mm thick Red Mandana cobble stone of 100mm x 100mm size, design & shape, laid in required pattern over and including 50mm thick compacted bed of coarse sand, filling the joints with Cement etc. all complete as per the direction of Engineer-in-charge.	Sqm	1,644.60	1,43,12,993.79
10.031	MR 10.031	299	Extra Rates for Item Nos. DSR 11.37, for leaving gap between two tiles in flooring (Ceramic Glazed Tiles) , of size 3 mm width and depth up to 6 mm and Grouting the joints of flooring & wall tiles having joints of 3 mm width, using Cementations grout mix of desired shade including filling /grouting and finishing complete as per drawing and as directed by Engineer-in-charge.	Sqm	226.33	67,671.49
10.032	MR 10.032	20697	Extra Rates for Item Nos. DSR item 11.36 for leaving gap between two tiles in skirting and wall dado (Ceramic Glazed Wall Tiles) of size 3 mm width and depth up to 6 mm and Grouting the joints of flooring & wall tiles having joints of 3 mm width, using Cementations grout mix of desired shade including filling /grouting and finishing complete as per drawing and as directed by Engineer-in-charge.	Sqm	173.08	35,82,187
10.033	MR 10.033	5329	Extra Rates for Item Nos. DSR 11.41.2, 11.41.3, 11.46.2, 11.46.3, for leaving gap between two tiles in flooring, skirting and wall dado of size 3 mm width and depth up to 6 mm and Grouting the joints of flooring & wall tiles having joints of 3 mm width, using Cementations grout mix of desired shade including filling /grouting and finishing complete as per drawing and as directed by Engineer-in-charge.	Sqm	119.83	6,38,569
10.034	MR 10.034	13474	Extra over item no. MR 10.018, MR 10.019, MR 10.020, MR 10.021, MR 10.022, MR 10.023, MR 10.024 for providing and filling 5 mm x 5mm groove in flooring with cementations grout to match the shade of the slab, including rubbing and cleaning complete as per drawing as directed by engineer in charge.	Sqm	180.55	24,32,693.71
10.035	MR 10.035	8485	Extra over item no. MR 10.008, or MR 10.009, for providing and filling 12 mm x 5 mm groove in flooring with cementations grout to match the shade of the slab, including rubbing and cleaning complete as per drawing as directed by engineer in charge.	Sqm	256.20	21,73,897.39
10.036	MR 10.036	738	Crazy pattern in terracotta clay tiles pieces for flooring for terraces & exteriors areas of approved shape & size 20 mm thick in flooring, including filling the gaps with light shade pigment with white cement marble powder mixture (3 parts of white cement : 1 part of marble powder) by weight in proportion of 4:7 (4 cement marble powder mix : 7 white, black, chocolate, grey, yellow or green marble chips of sizes from 1 mm to 4 mm nominal size by volume), with under layer 20 mm thick cement mortar 1:6 (1 cement : 6 coarse sand), including rubbing and polishing complete, as per architectural drawing as directed by engineer-in-charge. (use of wastage of terracotta clay tiles at site for crazy terracotta clay tiles flooring)	Sqm	1,091.95	8,05,859.55

Name of Work :- Development Of Permanent Campus Of Nu Rajgir.						
Subject :- Schedule-B (MR Items)						
Sr.no	MR Items	Total Quantity	Description	Unit	Rate	Total Amount
10.037	MR 10.037	18	Crazy pattern in Red Mandana Sand stone pieces of approved shape & size 20 mm thick in flooring , including filling the gaps with light shade pigment with white cement marble powder mixture (3 parts of white cement : 1 part of marble powder) by weight in proportion of 4:7 (4 cement marble powder mix : 7 white, black, chocolate, grey, yellow or green marble chips of sizes from 1 mm to 4 mm nominal size by volume), with under layer 20 mm thick cement mortar 1:6 (1 cement : 6 course sand),. including rubbing and polishing complete, as per architectural drawing as directed by engineer-in-charge. (use of wastage of Red Manadana sand stone at site shall be used for crazy sand stone flooring)	Sqm	1,091.95	19,655.11
10.038	MR 10.038	634	Crazy pattern in Kota stone pieces of approved shape & size 20 mm thick in flooring, including filling the gaps with light shade pigment with white cement marble powder mixture (3 parts of white cement : 1 part of marble powder) by weight in proportion of 4:7 (4 cement marble powder mix : 7 white, black, chocolate, grey, yellow or green marble chips of sizes from 1 mm to 4 mm nominal size by volume), with under layer 20 mm thick cement mortar 1:6 (1 cement : 6 course sand),. including rubbing and polishing complete, as per architectural drawing as directed by engineer-in-charge. (use of wastage of kotah stone at site for crazy kotah stone flooring)	Sqm	923.54	5,85,522.67
10.039	MR 10.039	13609	Providing and laying China Mosaic Top finish with all sides of vata using pieces of white glazed tiles of size (max) 4 to 8 sq.cm over 20 mm base of cement mortar 1:4 (1 cement : 4 Fine sand) with cement slurry @ 2.75 Kg of cement per Sqm, mixing of water proofing material including filling up the joints with grey cement rounding of edges and corners all complete as per the direction of Engineer in charge.	Sqm	733.04	99,75,893
10.040	MR 10.040	241	Providing and laying approved Light weight filler material wastage of AAC Blocks up to 100mm size in required thickness to level or in slope by using insulating material in 1:5:10 prop (1 cement: 5: Sand: 10 wastage of AAC Block material) as per approved manufacturers specification including scaffolding, compacting, finishing ,curing etc. complete as per drawing as directed by engineer in charge.	Cum	4,156.24	10,01,653
40			Subtotal of Flooring Work			10,66,92,547.86
	11		Roofing Work			
11.001	MR 11.001	2169	Providing and fixing false ceiling grid made out of anodised aluminium (with 15 micron anodic coating) T-sections 35 x15x1.5 mm size main runners, cross runners 23.5x19x1.5 mm fixed to main runners placed 600 mm centre to centre both ways so as to form a grid of 600 mm square. The frame work shall be suspended from ceiling by level adjusting hangers of 6 mm dia M.S rod fixed to roof slab by means of ceiling cleats and dash fastener. The suspenders shall be placed 600 x 1200 mm centre to centre including fixing to the frame with C.P brass screws and applying a priming coat of zinc chromate yellow primer (a) :8mm thick non asbestos fibre cement board - moisture resistant board	Sqm	997.96	21,64,577.23
11.002	MR 11.002	845	Providing and fixing 75 mm diameter and 60 cm long rain water spout in cement mortar 1:4 (1 cement : 4 fine sand) PVC pipe 4 Kg/cm 2	Nos	123.44	1,04,304.89
11.003	MR 11.003	1006	Providing and fixing extruded polystyrene insulation board of approved make having density 36kg/m3, K value 0.028 at 25 deg, green, pink or blue in colored by spot application over slab surfaces as per manufacturer specifications and as directed by engineer-in-charge.	Cum	16,157.82	1,62,54,764.19
11.004	MR 11.004	30	Providing and laying of 10 mm thick Polycarbonate Multiwall sheet as per drawing and as directed by engineer in charge having density of 1.2 g/m3 and 66 Mpa Yield stress. The sheet Should have linear thermal expansion of 0.000065 /K & thermal conductivity 0.20 w (m-k). Sheet shall be remain stable between - 40C to 120C. Length & width of the sheet should be as per detailed drawings & design. polycarbonate sheet should be available with co-extruded UV barrier applied on it. Poly carbonate sheet shall not remove any toxic fumes and hence pose no hazard to human life in case of fire. The sheet shall be fixed with 3mm thick Aluminium flat on the longitudinal joint & applied with a layer of EPDM rubber over the sheet. The joint between sheet & the Aluminium Joint shall be fully filled with RTV silicon sealant of approved make to avoid water leakage from the joint complete as per drawing and as directed by engineer in charge. The sheet shall be fixed to the structure with help of SDST screws.(Structural steel should be paid in relevant item)	Sqm	2,124.71	63,741.26

Name of Work :- Development Of Permanent Campus Of Nu Rajgir.						
Subject :- Schedule-B (MR Items)						
Sr.no	MR Items	Total Quantity	Description	Unit	Rate	Total Amount
11.005	MR 11.005	1582	<p>Providing & Fixing true horizontal level suspended Metal False ceiling comprising of GI Clip-In of approved make with double pip self-leveling feature and special tabs to allow removal of tile to enable plenum access with standard perforated (2.5mm diameter – 16% open area) visual consisting of 600X600 clip in tiles of 0.5mm thickness with bevel edge in Global white (Polyester Paint) color pre-coated of 25 microns paint thickness, with primer coat at the rear side with Light Reflectance > 60% and suitable for Green Building application, with Recycled content of 25%. Tiles would have Soundtex fleece hot pressed at the back of the perforated panel to achieve an NRC of upto 0.7 and fire performance of Class 1 as per BS 476 part 7</p> <p>To comprise 3000mm long GI 'C' channels spaced at 1200mm center securely fixed to the structural soffit by support clamp & approved 6mm dia threaded rod for rigid suspension. The last hanger at the end of each C channel should not be greater than 600mm from the adjacent wall. Use a C-channel connector for splicing two pieces of C-channels. 4000mm Dp-12 GI Main carriers (spring tee bars) shall be spaced at 600mm centers in a direction perpendicular to the C-channels and shall be secured at every intersection with C channel using a dp-12 hanger. Use Dp-12 connector to splice two pieces of Dp-12 main carriers. Tiles should be clipped in between two Dp-12 carriers (spring tee bars) from below.</p>	Sqm	2,025.11	32,03,728.76
			Subtotal of Roofing Work			2,17,91,116
	12		Finishing work			
12.001	MR 12.001	60440	<p>Pointing on brick work or brick flooring on non Modular bricks with cement mortar 1:3 (1 cement : 3 fine sand) as per directions of Engineer-in-Charge.</p> <p>(a) : Flush / Ruled/ Struck or weathered pointing on bricks of size 230 mm x 110 mm x 100 mm</p>	Sqm	107.07	64,71,356
12.002	MR 12.002	4623	<p>Extra rate over above DSR item 13.31.1 for Pointing on brick work or brick flooring on non Modular bricks with cement mortar 1:3 (1 cement : 3 fine sand) as per directions of Engineer-in-Charge.</p> <p>(a) : Flush / Ruled/ Struck or weathered pointing on bricks of size 230 mm x 110 mm x 50 mm instead of size 230 mm x 110 mm x 75 mm</p>	Sqm	35.64	1,64,754
12.003	MR 12.003	61058	<p>Providing and applying Melamine polishing with including preparation of surface and staining to the approved colour and shade as per the manufacturers specifications including scaffolding, curing, cleaning the surfaces and other incidental work to be done etc. complete at all floors for any height as directed by engineer in charge.</p>	Sqm	541.14	3,30,40,756.94
12.004	MR 12.004	100	<p>Providing and applying low pigmented textured wall finish with marble chips and minerals aggregate, giving Natural plast/ Random star effect of approved shade of approved make, finishing with i) 1st coat of Low VOC cement primer 0.80 Lt/10 Sqm ii) 2nd coat of stone finish highly dense smooth appearance with trowel @ 2.2 Kg/Sqm and iii) 3rd coat of stone finish by gun spraying , coverage 1.1 Kg/Sqm, Overall minimum 1.50 mm thickness as per manufacturer's specification including scaffolding, curing, cleaning the surfaces and other incidental work to be done etc. complete at all levels as directed by engineer in charge.</p>	Sqm	842.34	84,233.77
12.005	MR 12.005	109011	<p>Providing and applying breathable, non-reactive, antifungal, and water repellent Silane/ Siloxane chemical as approved by Engineer-in-charge, of approved make, diluted with solvent mineral Turpentine oil in the ratio of 1:12 (One part of approved chemical :12 Part of Turpentine oil), on the existing stone masonry surface or Stone cladding or RCC surfaces with two or more coats to give uniform application of chemical on the surface, including scaffolding, curing, cleaning the surfaces and other incidental work to be done etc. complete at all levels as directed by engineer in charge.</p>	Sqm	116.49	1,26,98,694.22
12.006	MR 12.006	79328	<p>Extra for expose shuttering over ordinary shuttering for exposed concrete elements using special sized of approved quality steel plates formwork / 12 mm waterproof plywood formwork / wood grain finish formwork with definite pattern as per approved drawing, Including providing and fixing necessary sleeves, grooves & Drip moulds for all shapes, at all levels and as directed by engineer in charge. Same kind of shuttering material should be used for standard and residual sizes. (no separate payment for small qty. in Metre)</p>	Sqm	484.23	3,84,12,625.56

Name of Work :- Development Of Permanent Campus Of Nu Rajgir.						
Subject :- Schedule-B (MR Items)						
Sr.no	MR Items	Total Quantity	Description	Unit	Rate	Total Amount
12.007	MR 12.007	64	Decorative stone work in sand stone including etching, carving and finishing with sandblasted finish of maximum size up to 3000mm x 3000mm including supply of stone block, labour & equipment for manual or machine carving as directed and installation on site up to any lead and lift.	Sqm	1,187.75	76,016.30
7			Subtotal of Finishing Work			9,09,48,436.30
	13		Water Proofing Work			
	14.0		SANITARY WORK			
14.001	MR 14.001	607	Supply, installation , testing & commissioning white vitreous china extended wall mounting water closet of approved make including Supply, installation , testing & commissioning of dual plate concealed cistern with flushing capacity 2 litre/ 4 litre (Low Flow), cost shall be inclusive of providing and fixing of accessories i.e. wall plate for flushing cistern ,seat cover, and cistern fittings, nuts, bolts and gasket, SS rack bolt /anchor bolts / fasteners for EWC hanging, and providing protection cover over cistern, cutting and making good the walls wherever required complete as per manufacturer recommendation Water closet- as per approved makes mentioned in the basket	each	32,431.29	1,96,85,793.30
14.002	MR 14.002	502	Supply, installation , testing & commissioning white vitreous china extended wall mounting water closet of approved make including Supply, installation , testing & commissioning of dual plate concealed cistern with flushing capacity 2 litre/ 4 litre (Low Flow), cost shall be inclusive of providing and fixing of accessories i.e. wall plate for flushing cistern ,seat cover, and cistern fittings, nuts, bolts and gasket, anchor bolts / fasteners for EWC hanging, and providing protection cover over cistern, cutting and making good the walls wherever required complete as per manufacturer recommendation Water closet- as per approved makes mentioned in the basket	each	29,785.72	1,49,52,430.77
14.003	MR 14.003	520	Supply, installation , testing & commissioning first quality white vitreous china wall mounted with pedestal washbasin, 32 mm CP brass waste and CP brass cast bottle trap and pipe to wall with CP brass flange and rubber adopter for waste connection complete including filling gap between counter and wash basin with approved type poly sulphide sealant, cutting and making good the walls wherever required as per manufacturer recommendation Wash Basin-as per approved makes mentioned in the basket	each	7,237.35	37,63,422.34
14.004	MR 14.004	87	Supply, installation , testing & commissioning first quality white vitreous china under rim counter top washbasins, 32 mm CP brass waste and CP brass cast bottle trap and pipe to wall with CP brass flange and rubber adopter for waste connection complete including filling gap between counter and wash basin with approved type poly sulphide sealant, cutting and making good the walls wherever required as per manufacturer recommendation Wash Basin-as per approved makes mentioned in the basket	each	6,833.17	5,94,485.45
14.005	MR 14.005	502	Supply, installation , testing & commissioning first quality white vitreous china wall mounted washbasin with 32 mm CP brass waste and CP brass cast bottle trap and pipe to wall with CP brass flange and rubber adopter for waste connection complete including filling gap between counter and wash basin with approved type poly sulphide sealant, cutting and making good the walls wherever required as per manufacturer recommendation Wash Basin-as per approved makes mentioned in the basket	each	5,378.10	26,99,807.00
14.006	MR 14.006	243	Supply, installation , testing & commissioning Stainless Steel AISI 304 (18/8) kitchen sink as per IS 13983 with C.I. brackets, bottle trap, waste coupling and stainless steel plug 40 mm, including painting of fittings and brackets, cutting and making good the walls wherever required. Kitchen sink with drain board -as per approved makes mentioned in the basket	each	17,443.89	42,38,864.43

Name of Work :- Development Of Permanent Campus Of Nu Rajgir.						
Subject :- Schedule-B (MR Items)						
Sr.no	MR Items	Total Quantity	Description	Unit	Rate	Total Amount
14.007	MR 14.007	243	Providing, Fixing of CP Brass wall mounted sink mixer with wall flange, extended operating lever, swinging spout complete with all accessories as per approved specifications and making good the walls wherever required. Sink mounted sink tap-as per approved makes mentioned in the basket	each	3,145.76	7,64,420.83
14.008	MR 14.008	1109	Providing, Fixing of CP Brass floor Mounted washbasin mixer with concealed & wall flange, extended operating lever, complete with all accessories as per approved specifications and making good the walls wherever required. Washbasin Mixer -as per approved makes mentioned in the basket	each	6,772.50	75,10,703.59
14.009	MR 14.009	1109	Supply, installation , testing & commissioning of C.P. brass dual coat robe hook with all accessories as per approved specifications and making good the walls wherever required. Robe Hook-as per approved makes mentioned in the basket	each	796.25	8,83,046.67
14.010	MR 14.010	2218	Supply, installation , testing & commissioning of C.P Braided Copper connection 450 mm long including nuts and washers and making connection to fixtures and fittings complete as per manufacturer recommendation Jas per approved makes mentioned in the basket	each	517.03	11,46,777.69
14.011	MR 14.011	1109	Supply, installation, testing & commissioning of CP finish Health Faucet of approved quality with CP braided flexible pipe 1 m long, wall hooked complete as per manufacturer recommendation. Health Faucet - as per approved makes mentioned in the basket	each	1,976.31	21,91,729.58
14.012	MR 14.012	1294	Supply, installation , testing & commissioning Heavy class SS grating with Cockroach proof SS strainer of approved design including setting in floor with cement motor to match with floor finish as per architectural requirement suitable for waste and FT. a) Size 100 mm x 100 mm , Make - as per approved makes mentioned in the basket	each	4,298.41	55,62,143.98
14.013	MR 14.013	1452	Supply, installation , testing & commissioning Heavy class SS grating with Cockroach proof SS strainer of approved design including setting in floor with cement motor to match with floor finish as per architectural requirement suitable for waste and FT. a) Size 100 mm x 100 mm , Make - as per approved makes mentioned in the basket	each	1,167.82	16,95,671.50
14.014	MR 14.014	2224	Supply, installation , testing & commissioning C.P. brass angle valve with wall flange of approved quality conforming to IS:8931complete as per approved specifications. a) 15mm nominal bore Angle Valve - as per approved makes mentioned in the basket	each	1,597.34	35,52,483.48
14.015	MR 14.015	1109	Supply, installation , testing & commissioning of C.P Toilet paper roll holder with all accessories as per approved specifications and making good the walls wherever required. Toilet Paper Roll - as per approved makes mentioned in the basket	each	1,759.04	19,50,777.95
14.016	MR 14.016	1110	Supply, installation , testing & commissioning of C.P Towel rod with all accessories as per approved specifications and making good the walls wherever required. Towel Rod- as per approved makes mentioned in the basket	each	2,499.39	27,74,327.55
14.017	MR 14.017	1107	Supply, installation , testing & commissioning of Soap Dish with all accessories as per approved specifications and making good the walls wherever required. Soap Dish - as per approved makes mentioned in the basket	each	826.06	9,14,451.18
14.018	MR 14.018	1109	Supply, installation , testing & commissioning of C.P Towel ring , cost inclusive of CP flange, fasteners, complete as per manufacturer recommendation. Towel Ring - as per approved makes mentioned in the basket	each	1,234.34	13,68,880.02
14.019	MR 14.019	1185	Supply, installation , testing & commissioning C.P. brass Two way bib tap with wall flange of approved quality conforming to IS:8931 with all accessories as per approved specifications and making good the walls wherever required. a) 15 mm nominal bore. a 15mm nominal bore Two Way Bib Tap - as per approved makes mentioned in the basket	each	2,386.07	28,27,495.77

Name of Work :- Development Of Permanent Campus Of Nu Rajgir.						
Subject :- Schedule-B (MR Items)						
Sr.no	MR Items	Total Quantity	Description	Unit	Rate	Total Amount
14.020	MR 14.020	412	Supply, installation , testing & commissioning of 15mm CP brass single lever concealed bath and shower wall mixer with diverter with 3 way shower head, spout, OH shower with adjustable type arm with wall flange with slip fit connection & hand shower with flexible pipe with bracket. Diverter -as per approved makes mentioned in the basket	each	18,839.63	77,61,928.32
14.021	MR 14.021	614	Supply, installation , testing & commissioning of 15mm CP Wall Mixer brass ,shower head, OH shower with adjustable type arm with wall flange with slip fit connection & hand shower with flexible pipe with bracket. as per approved makes mentioned in the basket	each	10,786.11	66,22,670.98
14.022	MR 14.022	377	Supply, installation , testing & commissioning C.P. brass bib tap with wall flange of approved quality conforming to IS:8931 a) 15 mm nominal bore. A) 15mm nominal bore Bib Tap - as per approved makes mentioned in the basket	each	1,460.12	5,50,466.09
14.023	MR 14.023	1109	Supply, installation , testing & commissioning of Soap Dispenser with all accessories as required and making good the walls wherever required. Soap Dispenser - as per approved makes mentioned in the basket	each	3,369.75	37,37,054.89
14.024	MR 14.024	25	Providing and Fixing 2 Nos. CP support arms and backrest of 35 mm dia to be mounted on the track (vertically and laterally) for handicap toilet complete as required. Model : as per approved makes mentioned in the basket	each	4,749.65	1,18,741.31
14.025	MR 14.025	25	Providing and Fixing Grab Bar 600mm long for handicap toilet. Model - as per approved makes mentioned in the basket	each	2,341.98	58,549.49
25			Subtotal of Sanitary work			9,79,27,124
	15		INTERNAL DRAINAGE			
15.001	MR 15.001	3326	Providing, fixing , Testing and Commissioning of Type B Ringfit UPVC SWR pipes for vent, soil, waste, confirming to IS 13592 and Fittings confirming IS 14735. Cost shall be inclusive of providing and fixing of all fittings (plain or door) e.g. bends, junctions, cowls, offsets, access pieces in pipes, & G.I. clamps spaced at 1.0 m centre to centre for wall and roof, jointing with solvent cement joints including cutting chase or making holes in walls and floors and making good as per specification and directed by Engineer In charge a) 75 mm Outer Dia	metre	408.49	13,58,812.42
15.002	MR 15.002	12635	b) 110mm Outer dia	metre	502.41	63,47,824.71
15.003	MR 15.003	947	Supply, installation , testing & commissioning in position SWR PVC P trap of self cleaning design of following sizes. Making proper connection with Cutting chase / hole in floors /slabs and bringing the same in proper condition in cement concrete 1:2:4 mix complete as per specifications. including cost of cutting and making good the walls and floors after installation of P traps wherever required. a) 100mm inlet and 75mm outlet	each	474.99	4,49,818.49
15.004	MR 15.004	819	b) 100mm inlet and 100 mm outlet	each	451.14	3,69,485.45
15.005	MR 15.005	1471	Supply, installation , testing & commissioning PVC saddle for connecting two or three inlet waste connection of 32/40 and 50mm nominal dia , including cutting and chasing as per approved specifications	each	604.78	8,89,628.58
15.006	MR 15.006	1538	Supply, installation , testing & commissioning 100mm x 63 mm PVC waste reducing elbow including cutting chases, making holes in the floor / slab, restoring the same after installation complete as per approved specifications and connection to pvc pipes	each	258.22	3,97,147.34
15.007	MR 15.007	83	Supply, installation , testing & commissioning upvc floor/ceiling clean out plug with suitable inlet key for opening male threaded joint with UPVC pipe & socket. Including socketed joint complete as per approved specifications. a) For 75 mm dia pipe	each	272.72	22,635.35
15.008	MR 15.008	243	b) For 110 mm dia pipe	each	375.50	91,245.34

Name of Work :- Development Of Permanent Campus Of Nu Rajgir.						
Subject :- Schedule-B (MR Items)						
Sr.no	MR Items	Total Quantity	Description	Unit	Rate	Total Amount
15.009	MR 15.009	1158	Supplying, installation , testing & commissioning of uPVC pipes and fittings (For Internal drainage & roof drainage) confirming to IS 4985 for drain in wall / floor / open, pressure rating 6 kg/cm2 tested to IS 2556 (XIII), seals to traps as per IS 5329, including all accessories, breaking / chasing walls, making necessary holes in floor, walls etc. as per approved specifications and making good etc., Cement mortar encasing under floor within toilets. a) 32 mm dia OD waste pipe.(8kg/cm2)	metre	97.75	1,13,206.00
15.010	MR 15.010	468	b) 40 mm dia OD waste pipe.	metre	107.09	50,062.50
15.011	MR 15.011	2137	c) 63 mm dia OD waste pipe.	metre	207.16	4,42,789.63
15.012	MR 15.012	3803	d) 110 mm dia OD waste pipe.	metre	487.56	18,54,223.43
15.013	MR 15.013	220	d) 160 mm dia OD waste pipe.	metre	650.23	1,43,051.01
15.014	MR 15.014	1413	g) 62.5 mm nominal inner dia pipes (Sch 80)	metre	2,043.34	28,87,240.32
15.015	MR 15.015	77	h) 75 mm nominal inner dia pipes (Sch 80)	metre	2,905.78	2,23,745.20
15.016	MR 15.016	7692	Supply, installation , testing & commissioning of Nitrile Rubber Insulation on Hot/ cold water having thermal conductivity .038 W/mok 0.212 BTU / (Hr-ft2-of/inch) at an average temperature of 30oC ,temperature range of -40oC to 105oC,Density of material shall not be less than 0.06 gm/cm3, class O type, complete as per manufacturer recommendation a) 15 mm nominal outer dia Pipes (9mm insulation thickness)	metre	47.73	3,67,122.04
15.017	MR 15.017	7099	b)20 mm nominal outer dia Pipes (9mm insulation thickness)	metre	58.43	4,14,797.17
15.018	MR 15.018	4600	c) 25 mm nominal outer dia Pipes (9mm insulation thickness)	metre	62.60	2,87,978.23
15.019	MR 15.019	181	d) 32 mm nominal outer dia Pipes (13mm insulation thickness)	metre	116.88	21,155.53
15.020	MR 15.020	357	e) 40 mm nominal outer dia Pipes (13mm insulation thickness)	metre	164.69	58,794.98
15.021	MR 15.021	1072	f) 50 mm nominal outer dia Pipes (13mm insulation thickness)	metre	187.27	2,00,758.47
15.022	MR 15.022	1675	g) 62.5 mm nominal outer dia Pipes (13mm insulation thickness)	metre	220.48	3,69,299.85
15.023	MR 15.023	7692	Providing and fixing proprietary polyshield outer mechanical protection over nitrile rubber insulation comprising of wrapping with poly glass tape helically wound and subsequently applying 2 coats of polyshield material (resin & hardener) as per manufacturers specification a) 15 mm nominal outer dia Pipes	metre	31.97	2,45,891.88
15.024	MR 15.024	7099	b)20 mm nominal outer dia Pipes	metre	38.33	2,72,126.89
15.025	MR 15.025	4600	c) 25 mm nominal outer dia Pipes	metre	44.70	2,05,615.57
15.026	MR 15.026	181	d) 32 mm nominal outer dia Pipes	metre	53.59	9,699.46
15.027	MR 15.027	357	e) 40 mm nominal outer dia Pipes	metre	63.77	22,767.18
15.028	MR 15.028	1072	f) 50 mm nominal outer dia Pipes	metre	76.48	81,989.00
15.029	MR 15.029	1675	g) 62.5 mm nominal outer dia Pipes	metre	95.58	1,60,096.49
15.030	MR 15.030	2811	Supplying & fixing full way lever operated forged brass ball valve of brass body with forged brass hard chrome plated steel ball tested to a pressure not less than 25 Kg / sqcm with threaded joints complete with nuts, bolts, male threaded adaptor, washers union etc. a) 15 mm nominal dia	each	901.82	25,35,002.20
15.031	MR 15.031	2183	b) 20 mm nominal dia	each	1,210.26	26,41,995.05
15.032	MR 15.032	137	c) 25 mm nominal dia	each	1,889.08	2,58,804.32
15.033	MR 15.033	144	d) 32 mm nominal dia	each	3,155.81	4,54,436.83
15.034	MR 15.034	144	e) 40 mm nominal dia	each	4,051.95	5,83,481.32
15.035	MR 15.035	55	f) 50 mm nominal dia	each	6,620.69	3,64,137.69
15.036	MR 15.036	64	Supply, Installation, Testing and commissioning of slim seal type C.I. Butterfly valve (Body : Grey Cast Iron, shaft : SS, Disc : SG Iron (Rilson coated), Liner : HT - EPDM) of approved make with PN 10 rating flange dimensions shall be confirming to IS 6392, washer, nuts & bolts. Rated to temperature of 85 Deg C and tested to a pressure not less than 15 Kg/Sq.cm. a) 65mm nominal dia	each	5,526.98	3,53,726.46
15.037	MR 15.037	26	b) 80mm nominal dia.	each	5,951.12	1,54,729.08
15.038	MR 15.038	11	c) 100mm nominal dia.	each	8,510.83	93,619.08
15.039	MR 15.039	1	c) 150mm nominal dia.	each	11,399.76	11,399.76

Name of Work :- Development Of Permanent Campus Of Nu Rajgir.						
Subject :- Schedule-B (MR Items)						
Sr.no	MR Items	Total Quantity	Description	Unit	Rate	Total Amount
15.040	MR 15.040	73	Providing & fixing gun metal / Bronze non – return valve of approved make with union / flange, washer, nuts & bolts. Rated to temperature of 85 Deg C and tested to a pressure not less than 15 Kg/Sq.cm. a) 15mm nominal dia	each	1,244.83	90,872.41
15.041	MR 15.041	4	b) 20 mm nominal dia	each	1,334.48	5,337.93
15.042	MR 15.042	105	Supply, installation , testing & commissioning Gun metal float valve with cast brass lever arm and plastic ball of adequate size confirming to IS 1703 of approved quality complete as per specifications and as directed by Engineer - in - Charge. a) 32 mm nominal dia	each	2,621.17	2,75,222.80
15.043	MR 15.043	105	b)40 mm nominal dia	each	3,503.03	3,67,817.81
43			Subtotal of Internal Plumbing work			2,65,49,591
	16.0		EXTERNAL PLUMBING WORK			
16.001	MR- 16.001 .	4100	Sewer Drainage - Providing and fixing of uPVC SDR pipes as Under ground Sewerage Pipes as per IS 15328-2003 for underground non pressure applications , placing in trench , jointing the pipes with solvent cement as per manufacturer's specifications complete as per specifications and as directed by the Engineer - in - Charge. Make of the pipe: Supreme/Finolex SN4 (SDR 41, Stiffness Class 4KN/m2). PCC for bedding, haunching or all round the pipe, excavation and backfilling shall be payable separately under relevant head, a) 160 mm nominal dia	metre	1,195.15	49,00,109.49
16.002	MR- 16.002 .	674	b) 200 mm nominal dia	metre	1,431.78	9,65,019.96
16.003	MR- 16.003 .	697	c) 250 mm nominal dia	metre	2,258.64	15,74,270.39
16.004	MR- 16.004 .	50	d) 315 mm nominal dia	metre	3,235.82	1,61,791.15
16.005	MR- 16.005 .	3	Constructing Disilting chamber (roof water disilting) with coarse sand, aggregate & nelton mesh, chamber will be constructed (as shown in drawing) of brick work with bricks of class 75 with cement mortar 1:5 (1 cement:5 fine sand) plastering internal face with cement mortar 1:3 (1 cement: 3 fine sand and rough plaster on outer face with a floating coat of neat cement. R.C.C top slab with medium duty HD -20 SFRC manhole cover and frame of 600 mm dia. The weight of cover & frame not be less than182 Kg as per standard design. Including excavation, dewatering, refilling, watering, ramming and removing the surplus excavated material complete as per approved specifications and indicated tender drawing. (All sizes are clear internal sizes). a Size 2000 x 2000 x 1500 mm deep	each	25,714.50	77,143.49
16.006	MR- 16.006 .	50	Providing and fixing G.I. pipes B Class (Medium duty), confirming to IS 1239 Part 1 with G.I. fittings as per IS 1879 Part 1 to X , including painting of pipes, excavation, maintaining top of pipe 1m below from finish levels, backfilling complete as per specifications and directed by Engineer - in - Charge. Excavation, painting and backfilling shall be paid separately under relevant head External work a) 32 mm nominal inner dia Pipes	metre	546.32	27,315.85
16.007	MR- 16.007 .	50	b)40 mm nominal inner dia Pipes	metre	552.66	27,633.14
16.008	MR- 16.008 .	50	c)50 mm nominal inner dia Pipes	metre	753.61	37,680.55
16.009	MR- 16.009 .	80	d)65 mm nominal inner dia Pipes	metre	949.99	75,999.58
16.010	MR- 16.010 .	150	e)80 mm nominal inner dia Pipes	metre	1,157.29	1,73,593.32
16.011	MR- 16.011 .	150	f)100 mm nominal inner dia Pipes	metre	1,888.27	2,83,240.94
16.012	MR- 16.012 .	50	g)150 mm nominal inner dia Pipes	metre	2,972.75	1,48,637.40
16.013	MR- 16.013 .	150	f)100 mm nominal inner dia Pipes	metre	59.64	8,946.21
16.014	MR- 16.014 .	50	g)150 mm nominal inner dia Pipes	metre	74.34	3,716.95
16.015	MR- 16.015 .	2	Constructing Grease Trap of size as mentioned below of 1200 liquid depth in brick work of class 75 with cement mortar (1:6), inside plastering 16 mm thick with cement mortar 1:3 with floating coat of neat cement and rough plaster on outside. Including aluminium bucket as per detail to collect the grease. RCC top slab with 2 nos. 600 x 600 mm dia medium duty hinged type cover with epoxy coating, double seal manhole covers with frame (weight of covers & weight of frame 75 Kg), necessary 150 mm thick foundation concrete (1:2:4). 2000mm x 1500mm as per detailed drawings and specifications.	Lot	66,139.29	1,32,278.59

Name of Work :- Development Of Permanent Campus Of Nu Rajgir.						
Subject :- Schedule-B (MR Items)						
Sr.no	MR Items	Total Quantity	Description	Unit	Rate	Total Amount
16.016	MR 16.016	15	Supply, Installation, Testing and commissioning of slim seal type C.I. Butterfly valve (Body : Grey Cast Iron, shaft : SS, Disc : SG Iron (Rilson coated), Liner : HT - EPDM) of approved make with PN 10 rating flange dimensions shall be conforming to IS 6392, washer, nuts & bolts. Rated to temperature of 85 Deg C and tested to a pressure not less than 15 Kg/Sq.cm. a) 65mm nominal dia	each	5,526.98	82,904.64
16.017	MR 16.017	13	b) 80mm nominal dia.	each	5,951.12	77,364.54
16.018	MR 16.018	12	c) 100mm nominal dia.	each	8,510.83	1,02,129.90
16.019	MR 16.019	12	c) 150mm nominal dia.	each	11,399.76	1,36,797.10
19			Subtotal of External Plumbing work			89,96,573
	17.0		PUMPS, TREATMENT SYSTEM & EQUIPMENTS			
17.001	MR- 17.001 .	1	STP HOSTEL- Design , Construction, Testing and Commissioning of Sewage Treatment plant of 42 cum per day capacity including settler, Anaerobic baffle Reactor + Anaerobic Filter & plant gravel filter (DEWAT Technology), and Polishing/finishing pond. The cost shall be inclusive of design, detailed engineering, submission and approval of drawings, testing and commissioning of complete system in all respect along with establishing the guarantee outlet quality parameters The work should be completed as specified in Technical specification.	Lot	48,67,128.00	48,67,128.00
17.002	MR- 17.002 .	1	STP FACULTY HOUSING- Design , Construction, Testing and Commissioning of Sewage Treatment plant of 76 cum per day capacity including settler, Anaerobic baffle Reactor + Anaerobic Filter & plant gravel filter (DEWAT Technology), and Polishing/finishing pond. The cost shall be inclusive of design, detailed engineering, submission and approval of drawings, testing and commissioning of complete system in all respect along with establishing the guarantee outlet quality parameters The work should be completed as specified in Technical specification.	Lot	63,60,744.00	63,60,744.00
17.003	MR- 17.003 .	1	Sewage Water Transfer Pump- Submersible Centrifugal pump - Supply, installation , testing & commissioning of submersible pumps for suitable rating, with non-clog free flow open impeller, mechanical seal, suitable for operation on 415 volts + 5% -15%, 50 C/s , speed 960/1440R&M including oil chamber, guide wire/ guide pipes for lifting & lowering of pump, mechanical seal, electrical control panels fabricated from 14 gauge CRCA sheet volt meter ammeter with selector switch, TPMPCB, 5 VA CL : CTs, phase indicating lamps protected by 2 amp SP MCB, DOL starter, necessary wiring, cable alleys, earthing, interlocking with Automatic float type level controller, provision of high level alarm, sequence timer, potential free contact to starter , S.S. galvanized lifting chain, duck foot bend with following specifications: (a) Set of Total 2 nos. of Pumps (Both operating in cyclic operation) (b) Necessary cables from pump set to control panel including termination as required (panel shall be located in flushing water treatment plant room , cost of cable and termination shall be paid separately under relevant head).-- 1 Set (b) Electrical switch panel having all necessary accessories & safety devices of standard specifications. Panel shall be compatible for integration with Building Management / Automation system with adequate potential free contacts etc.--1 Set (c) Automatic water level controller with necessary length of cable up to control panel, complete as required Location : Collection chamber to respective STP inlet , MOC : CI body; SS Impeller & Shaft Solid Handling : 15-20 MM a) Flow rate : 20m3/hr. Head : 10 Mts (Student Hostel)	Set	2,50,527.33	2,50,527.33
17.004	MR- 17.004 .	1	b) Flow rate 30m3/hr. Head 10 M (Faculty Housing)	Set	2,50,278.08	2,50,278.08

Name of Work :- Development Of Permanent Campus Of Nu Rajgir.						
Subject :- Schedule-B (MR Items)						
Sr.no	MR Items	Total Quantity	Description	Unit	Rate	Total Amount
17.005	MR- 17.005 .	1	Submersible Centrifugal pump - Supply, installation, testing and commissioning of continuous duty submersible centrifugal non-clogging pumps complete with 3 phase motor with all necessary protection and mechanical seal etc. complete with all ancillaries including float type level controllers, electrical control panels fabricated from 14 gauge CRCA sheet volt meter ammeter with selector switch, TPMPCB, 5 VA CL : CTs, phase indicating lamps protected by 2 amp SP MCB, DOL starter, necessary wiring, cable alleys, earthing, interlocking with Automatic float type level controller, provision of high level alarm, sequence timer, potential free contact to starter for connection to BAS, both pumps may run simultaneously at pre determined level. (1 Working + 1 Standby) Location : Polishing Pond to STP treated water collection tank for tertiary treatment MOC : CI body; SS Impeller & Shaft Solid Handling : 15-20 MM a) Flow rate : 20 m3/hr. Head : 15 Mts (Student Hostel)	Set	2,50,851.29	2,50,851.29
17.006	MR- 17.006 .	1	b) Flow rate 30m3/hr. Head 15 M (Faculty Housing)	Set	2,50,278.08	2,50,278.08
17.007	MR- 17.007 .	44	Supply, installation, testing & commissioning M.S. puddle flanges fabricated of 750 mm long pipe pieces to R.C.C. water tanks wall / slab. MS pipe shall be of Heavy duty, confirming to IS 1239 part 1.The entire fitting shall be hot dipped galvanised (Flanges shall confirm to BS10 Table E) . a) 32 mm dia (Screwed ends MS plate 6 mm thick; 100 mm x 100 mm plus dia of pipe).	each	2,526.96	1,11,186.21
17.008	MR- 17.008 .	44	b) 40 mm dia (Screwed ends MS plate 6 mm thick; 100 mm x 100 mm plus dia of pipe).	each	3,261.84	1,43,520.98
17.009	MR- 17.009 .	56	c) 50 mm dia (Screwed ends MS plate 6 mm thick; 250 mm x 250 mm plus dia of pipe).	each	3,996.72	2,23,816.40
17.010	MR- 17.010 .	56	d) 80 mm dia (Flanged ends MS plate 6 mm thick; 250 mm x 250 mm plus dia of pipe).	each	5,466.48	3,06,123.08
17.011	MR- 17.011 .	6	e) 100 mm dia (Flanged ends MS plate 6 mm thick; 300 mm x 300 mm plus dia of pipe).	each	6,201.36	37,208.19
17.012	MR- 17.012 .	6	f) 150 mm dia(Flanged ends MS plate 6 mm thick; 300 mm x 300 mm plus dia of pipe).	each	7,671.13	46,026.76
17.013	MR- 17.013 .	4	g) 200 mm dia(Flanged ends MS plate 6 mm thick; 300 mm x 300 mm plus dia of pipe).	each	9,875.77	39,503.08
13			Subtotal of Pumps, Treatment System & Equipment's			1,31,37,191
	18.0		FIRE FIGHTING WORKS			
18.001	MR- 18.001 .	41	Supply, installation, testing and commissioning of booster pump comprising of the following: (a). Horizontal centrifugal pump, suitable for operation on 415 volts ± 6%, 3 phase, 50 HZ A.C supply. The pump casing shall be CI, shaft shall be CS & impeller /shaft sleeve / casing wearing ring shall be bronze. The system shall be complete with necessary pressure gauge with gun metal shut off cock on delivery side. (The pump should meet the condition and shall be gotten approved by the Local fire Authority). (b). Squirrel cage induction motor TEFC type for operation on 415 V, 3 phase 50 HZ AC supply for the above pump with a synchronous speed of 2900 R.P.M. with flexible coupling and coupling guard etc. as required. (c). Common base plate for (a) and (b) from M.S. channel as required size. Common base plate for (a) and (b) from M.S. channel of required size.d. Suitable cement concrete foundation with plaster, (design and drawing to be provided by the Contractor while the foundation will be done by others) complete with antivibration arrangement of cushy foot mountings. For pump defined above & of duty as follows : a) Flow :450 LPM Head : 30 mts	each	61,265.87	25,11,900.78
18.002	MR- 18.002 .	41	Supply, installation , testing & commissioning of pressure switch for auto cut in & cut out of pump. The pressure switch shall decide maximum pressure at which the switch has to changeover , On-OFF differential, maximum/minimum changeover pressure . Pressure switch shall be mounted on pipe with electrical contact , connection from fire panel, Cost shall be inclusive of providing any short pieces, nipples, elbows etc. as per approved specifications.	each	6,235.53	2,55,656.74
18.003	MR- 18.003 .	82	Supply, installation , testing & commissioning dial type (100 mm) pressure gauge (glycerine filled) with isolation ball valve suitable for working pressure of 250 PSI. Cost shall be inclusive of providing any short pieces, nipples, elbows etc. as per approved specifications.	each	2,526.96	2,07,210.67

Name of Work :- Development Of Permanent Campus Of Nu Rajgir.						
Subject :- Schedule-B (MR Items)						
Sr.no	MR Items	Total Quantity	Description	Unit	Rate	Total Amount
18.004	MR- 18.004 .	201	Providing, laying, jointing, testing and commissioning of following sizes of pipes conforming to IS-1239 , Heavy class with all accessories like all fittings (standard MS fitting with welded joint shall be used on the pipes) including tees, elbows, reducers, union, flanges, rubber gaskets, GI nuts bolts, washer including supporting/fixing the pipe on floor / wall /ceiling with clamps, hangers (using anchor fasteners) as per specification. G.I. pipe sleeve of suitable higher size shall be provided and fixed wherever the pipes are crossing the walls/floors and sealing the sleeves with glass wool in between & fire sealant compound at either end all as directed by Engineer - in - Charge / mandatory requirements including cutting holes and chases in brick, RCC work and making good the same to original conditions complete in all respects. All hangers, clamps, brackets etc. shall be of galvanized iron unless specified otherwise and the supply of the same shall also be included in the quoted rates under this head. (Welding of any kind on the galvanized support / hanger shall not be permitted.) Synthetic enamel paint of approved shade over a coat of zinc primer will be applied as required by Engineer - in - Charge/mandatory requirement, without extra cost.. a) 25mm nominal dia.	metre	417.98	84,139.40
18.005	MR- 18.005 .	1118	b) 65 mm nominal dia	metre	1,000.43	11,18,195.42
18.006	MR- 18.006 .	203	c) 80 mm nominal dia	metre	1,209.96	2,45,561.82
18.007	MR- 18.007 .	110	d) 100 mm nominal dia	metre	1,695.99	1,86,559.26
18.008	MR- 18.008 .	281	Supply, installation , testing & commissioning forged brass ball valve with forged brass ball, suitable for working pressure of 16kg/sq.cm a) 25mm nominal dia (Cost shall be inclusive of providing necessary union / flange connection).	each	1,305.89	3,66,302.19
18.009	MR- 18.009 .	41	b) 40 mm nominal dia	each	2,031.23	83,280.53
18.010	MR- 18.010 .	41	c) 50 mm nominal dia	each	2,727.80	1,11,839.67
18.011	MR- 18.011 .	281	Supply, installation , testing & commissioning swinging type First Aid hose reel in red colour drum with 36 mts long and 20 mm dia heavy duty rubber water hose, 20 mm dia globe valve stop cock, terminating with G.M. coupling & nozzle of 6mm outlet with shut off valve conforming to IS 8090 - 1976 complete with MS socket for tap-off, drum and brackets (including painting) for fixing on wall with anchor fastener, bolts & nuts conforming to IS:884-1969 complete as per approved specifications.	each	11,915.03	33,42,164.83
18.012	MR- 18.012 .	281	Fire duct Shutter fabricated out of M.S. sheet of 16swg and frame, door shall be 900mm x 1200 mm min. & fixed with 4 mm thick Glass, suitable Rubber beading and Locking arrangement. Quoted rate shall include all fasteners etc., and complete shutter shall be powder coated of approved colour both inside and out side etc., complete.	each	7,477.74	20,97,505.23
18.013	MR- 18.013 .	3	Mechanical Foam type Fire Extinguisher (ISI marked). In HP Mild Steel Cylinders ISI marked fitted with pressure indicating gauge, internal tube, squeeze lever type valve fully charged complete in all respects including wall suspension bracket / trolley mounted and conforming to IS:910 a) 50 Litres (trolley mounted)	each	24,013.00	72,039.00
18.014	MR- 18.014 .	633	Supply, installation, testing and commissioning of following types of extinguisher with provision of wall bracket (fixed with anchor fastener).ISI marked (IS:940) portable chemical fire extinguisher, water (gas pressure) type capacity 9 litres with gun metal cap and nozzle and complete in all respects including initial fill and wall suspension brackets (As approved by IS 15683)	each	6,810.41	43,11,672.75
18.015	MR- 18.015 .	633	ISI marked (IS:2878) Fire Extinguisher, Carbon-di-oxide type capacity 4.5 Kg (circular should be PESO approved). Flat base including valve, discharge hose of not less than 10 mm dia, 1M long and complete in all respects including initial fill with CO2 gas conforming to IS:307-1966 filled to a filling rate of not more than 0.667 and wall suspension bracket.	each	13,202.07	83,58,232.80
18.016	MR- 18.016 .	10	Supplying and installing at approved location approved make fire buckets of 24 gauge galvanized steel sheet, standard 9 litre capacity and of round bottom shape, painted white inside and red outside and black on the bottom, inscribed with letters "FIRE" in black and gold. Cost shall be inclusive of providing MS stand duly painted over a coat of primer complete as per specification- Set of 6 Buckets/Stand.	set	5,705.02	57,050.23

Name of Work :- Development Of Permanent Campus Of Nu Rajgir.						
Subject :- Schedule-B (MR Items)						
Sr.no	MR Items	Total Quantity	Description	Unit	Rate	Total Amount
18.017	MR- 18.017 .	82	<p>ELECTRICAL SYSTEM, INSTRUMENTATIONS & MCC CONTROLS FOR FIRE PROTECTION SYSTEM</p> <p>CABLES AND END TERMINATIONS</p> <p>Supply, Installation, Testing and Commissioning of following armoured / flexible / unarmoured cables. All the below mentioned cables shall be 1.1kV grade, XLPE insulated, FRLS type armoured cables of Al / Cu, with inner and outer PVC sheath. The said cables shall confirm IS 7098-1, BS 5467, IEC 60502-1, BS 7889 with all supplementary. The rate shall include complete cost of Supply, laying/installation, testing and commissioning including cost of conduits (wherever specified for flexible cables only), fire retardant sealant and all tools and accessories required to Complete the job in full respect.</p> <p>4C X 25 sq.mm 2XWY</p>	metre	3,076.34	2,52,259.96
18.018	MR- 18.018 .	82	2C X 2.5 sq.mm. 2XY for instrumentation	metre	228.61	18,746.22
18.019	MR- 18.019 .	41	<p>Design, fabrication, assembling, wiring, supply, installation, testing and commissioning of motor control centre fabricated out of 14 gauge CRCA sheet steel in form with reinforcement of suitable size angle iron, channel 'T' sections irons and /or flats wherever necessary.</p> <p>MCC-1 for Fire Fighting equipment</p> <p>Incoming</p> <p>63 amps TPN MCCB with the following accessories:</p> <p>a.) 0-500 volts 96 x 96 mm square voltmeter with selector switch protected by 2 amps TP MCB. 1 Set</p> <p>b.) Phase indicating lamps protected by 2 amp SP MCB 3 Sets</p> <p>Outgoings</p> <p>a.) 1 Nos. 32 amps TPN MPCB, 5.5 KW DOL starter, EOCR with single phase preventer and outgoing feeder to terrace pump motor. The compartment shall contain CT operated ammeter of 0-63 amps and indicating lamps with MCBs for 'ON'/OFF/TRIP' status of pump motors.</p> <p>b.) Necessary cable alleys, internal wiring, and interlocking, earthing for all equipment shall also included.</p> <p>c.) Necessary cable alleys space for spare switches, internal wiring and copper earthing of all equipment shall also be included. All switch gears/control gears shall be motor duty rating.</p> <p>d) Complete Auto Start and stop of pumps at set pressure as per specifications</p> <p>e) This panel shall be placed open to sky , protection shall be ensured</p> <p>Provision shall be made for providing potential free contacts to all pumps starters for connection to building automation system.</p>	each	1,11,341.83	45,65,014.94
19			Subtotal of Fire fighting work			2,82,45,332
	19.0		ELECTRICAL WORK			

Name of Work :- Development Of Permanent Campus Of Nu Rajgir.						
Subject :- Schedule-B (MR Items)						
Sr.no	MR Items	Total Quantity	Description	Unit	Rate	Total Amount
			<p>General Notes :</p> <p>Chapter-1 Wiring (As per CPWD DSR 2014 E & M)</p> <ol style="list-style-type: none"> 1. This section covers Items of Sub mains and point wiring for all internal areas. 2. Switchboards, power plugs, switches for power plugs, GI Modular boxes and cover plates and its accessories are included in this chapter. 3 GI box, sockets, cover plates for TV and telephone are included in this chapter. 4. Point wiring for light/bell/fan/exhaust fan - wiring including termination from switch boxes to the point outlet including Concealed/surface conduits, the GI box, modular cover plate and switches are included in the rates of point wiring. 5. Sub mains wiring includes wiring including termination from distribution boards to respective switchboards and power outlets for all internal areas. wiring for DB controlled light points are also considered in sub mains wiring. 6. All tools and accessories required to complete the job in full respect and as per engineer in charge shall be included. <p>Chapter-2 MCCBs, MCBs & DBs:</p> <ol style="list-style-type: none"> 1. Items under this section covers Distribution boards considered for all internal and common areas. 2. Switchgears used inside the distribution boards and its accessories are covered under this chapter. 3. All internal wirings including neutral and earthing connections inside DB has to be fully completed. 4. External earthing for DB is considered under earthing section and shall be paid under relevant items. 5. Minimum Breaking capacity for all switchgears inside DB shall be 10kA with Ics=Icu. 4. All tools and accessories required to complete the job in full respect and as per engineer in charge shall be included. <p>Chapter-3 Cables & End terminations:</p> <ol style="list-style-type: none"> 1. Items under this section covers Armoured / Unarmoured / flexible AL/Cu. cables & their end terminations from Substation to different feeder pillars , from feeder pillars to metering panels / Main LT Panel of different buildings and therefrom to different distribution boards and HVAC Panels. 			
19.001	MR- 19.001 .	516	Supplying and fixing shuttered type, UTP CAT6 compatible, RJ-45 data connectors suitable for fixing in existing 1M (75 mm x 75 mm) modular plate and complete as required.	Each	724.86	3,74,027.36
19.002	MR 19.002	4629	(c) : Universal 6/16 amp switch & socket outlet	Each	424.08	19,63,053.24
19.003	MR 19.003	10	(n) : Supplying and fixing 32 amp, 240 Volts, SPN industrial type, splash proof , IP-67 for kitchen socket outlet with 2 pole and earth, metal enclosed plug top along with 32 amps "C curve", SP , MCB, in sheet steel enclosure, on surface or in recess, with chained metal cover for socket outlet and complete with connections , testing commissioning etc. as required.	Each	3,109.42	31,094.22
19.004	MR 19.004	5	(o) : Supplying and fixing 63 amp, 240 Volts, SPN industrial type, splash proof , IP-67 for kitchen socket outlet with 2 pole and earth, metal enclosed plug top along with 63 amps "C curve", SP , MCB, in sheet steel enclosure, on surface or in recess, with chained metal cover for socket outlet and complete with connections , testing commissioning etc. as required.	Each	6,216.65	31,083.26
19.005	MR 19.005	2	Supplying and fixing 40 amp, 415 Volts, TPN industrial type, IP 44 for kitchen socket outlet with 4 pole and earth, metal enclosed plug top along with 40 amps "C curve", TP , MCB, in sheet steel enclosure, on surface or in recess, with chained metal cover for socket outlet and complete with connections , testing commissioning etc. as required.	Each	6,781.30	13,562.61
19.006	MR 19.006	2	Supplying and fixing 63 amp, 415 Volts, waterproof TPN industrial type, IP 67 for kitchen socket outlet with 4 pole and earth, metal enclosed plug top along with 63 amps "C curve", TP , MCB, in sheet steel enclosure, on surface or in recess, with chained metal cover for socket outlet and complete with connections , testing commissioning etc. as required.	Each	8,092.54	16,185.09

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Subject :- Schedule-B (MR Items)						
Sr.no	MR Items	Total Quantity	Description	Unit	Rate	Total Amount
19.007	MR 19.007	56	Supply, Installation, Testing and Commissioning of following three phase and neutral (TPN), MS powder coated with thickness 1.6 mm, horizontal , double door (IP 43), recessed mounting type, MCB distribution boards complying to IS 8623:1977, IS 2675: 1983, IEC 439-3 and BS EN 60439-3 including all supplements. The distribution boards shall have protection against mechanical impact index of minimum IK08. Supplier should provide the testing certificate for Ingress protection and mechanical impact tested at third party location. outer door shall be hinged type, inner door shall be fixed up with screws with cut-outs for MCB operation, copper bus bar of 100 Amp rating, along with din bars, neutral bars, earth bars, lockable door arrangement including all internal connections as required. The board shall have adequate space for termination of incoming and outgoing cables, and also a separate space with proper partition of same material or better material and thickness as specified for distribution board , to accommodate a TV splitter and a 5 pair telephone terminal block, removable un drilled top & bottom gland plates, should be suitable for wall, column mounting type B. (b) 6 Way TPN DB with 18 modules for SP MCBs in outgoing , 2 modules per phase for RCCB, min 4 modules for placing incoming MCB/RCDs, space to accommodate a TV splitter and a 5 pair telephone terminal block complete with earth bar,	Each	4,344.86	2,43,312.08
19.008	MR 19.008	116	(c) 8 Way TPN DB with 24 modules for SP MCBs in outgoing , 2 modules per phase for RCCB, min 4 modules for placing incoming MCB/RCDs, space to accommodate a TV splitter and a 5 pair telephone terminal block complete with earth bar, neutral bars, din rails, connections but excluding the cost of MCCB/MCB/RCDs.	Each	5,329.13	6,18,179.66
19.009	MR 19.009	41	(d) 12 Way TPN DB with 36 modules for SP MCBs in outgoing , 2 modules per phase for RCCB, min 4 modules for placing incoming MCB/RCDs, space to accommodate a TV splitter and a 5 pair telephone terminal block complete with earth bar, neutral bars, din rails, connections but excluding the cost of MCCB/MCB/RCDs.	Each	7,436.93	3,04,914.07
19.010	MR 19.010	6	Supply, Installation, Testing and Commissioning of MCB distribution boards complying to IS 8623:1977, IS 2675: 1983, IEC 439-3 and BS EN 60439-3 including all supplements, MS powder coated with thickness 1.6 mm, horizontal , double door (IP 43), recessed mounting type, for following single phase and neutral (SPN) DB. The distribution boards shall have protection against mechanical impact index of minimum IK08. Supplier should provide the testing certificate for Ingress protection and mechanical impact tested at third party location. outer door shall be hinged type, inner door shall be fixed up with screws with cut-outs for MCB operation, copper bus bar of 100 Amp, along with din bars, neutral bars, earth bars, lockable door arrangement including all internal connections as required. The board shall have adequate space for termination of incoming and outgoing cables, and also a separate space with proper partition of same material specification as distribution board or better to accommodate a TV splitter and a 5 pair krone connector, removable un drilled top & bottom gland plates, should be suitable for wall, column mounting type B. (a) 8 Way SPN DB with 8 modules for SP MCBs in outgoing , 2 modules for placing incoming MCCB/MCB/RCDs, space to accommodate a TV splitter and a 5 pair telephone terminal block complete with earth bar, neutral bars, din rails,	Each	2,226.16	13,356.95
19.011	MR 19.011	198	(c) 12 Way SPN DB with 12 modules for SP MCBs in outgoing , 2 modules for placing incoming MCCB/MCB/RCDs, space to accommodate a TV splitter and a 5 pair telephone terminal block complete with earth bar, neutral bars, din rails, connections but excluding the cost of MCCB/MCB/RCDs.	Each	2,509.07	4,96,796.78
19.012	MR 19.012	87	Supply, Installation, Testing and Commissioning of MCB distribution boards complying to IS 8623:1977, IS 2675: 1983, IEC 439-3 and BS EN 60439-3 including all supplements , MS powder coated with thickness minimum 1.6 mm, horizontal , double door (IP 43), recessed mounting type, for following configuration vertical three phase and neutral (VTPN) DB . The vertical TPN DB shall be recessed mounted vertically with modules suitable to draw out both single phase and three phase outgoing. The distribution boards shall have protection against mechanical impact index of minimum IK08. Supplier should provide the testing certificate for Ingress protection and mechanical impact tested at third party location. outer door shall be hinged type, inner door shall be fixed up with screws with cut-outs for MCB operation, copper bus bar of 200 Amp. along with din bars, neutral bars, earth bars including all internal connections as required. The board shall have adequate space for termination of incoming and outgoing cables, and also a separate space with proper partition of same material specification as distribution board or better to accommodate a TV splitter and a 5 pair krone connector, removable un drilled top & bottom gland plates, should be suitable for wall, column mounting type B. (a) 6 Way VTPN DB with 18 modules suitable for both SP and TP MCBs in outgoing , (min 4 modules for placing incoming	Each	9,904.07	8,61,653.74
19.013	MR 19.013	19	(b) 8 Way VTPN DB with 24 modules suitable for both SP and TP MCBs in outgoing , (min 4 modules for placing incoming MCB/RCDs, or required modules for MCCB) along with space to accommodate a TV splitter and a 5 pair telephone terminal block complete with earth bar, neutral bars, din rails, connections but excluding the cost of MCCB/MCB/RCDs.	Each	12,282.54	2,33,368.27

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Subject :- Schedule-B (MR Items)						
Sr.no	MR Items	Total Quantity	Description	Unit	Rate	Total Amount
19.014	MR 19.014	302	Supplying and fixing 40 amps rating, 240/415 volts, "C" curve, miniature circuit breaker suitable for inductive load of following poles in the existing MCB DB complete with connections, testing and commissioning etc. as required. (c) Four pole	Each	1,899.41	5,73,621.35
19.015	MR 19.015	228	Supplying and fixing 63 amps rating, 240/415 volts, "C" curve, miniature circuit breaker suitable for inductive load of following poles in the existing MCB DB complete with connections, testing and commissioning etc. as required. (b) Four pole	Each	1,899.41	4,33,065.13
19.016	MR 19.016	131	Supplying and fixing 32 amps rating, 415 volts, four pole, "C" curve, miniature circuit breaker suitable for inductive load in the existing MCB DB complete with connections, testing and commissioning etc. as required.	Each	1,251.88	1,63,995.72
19.017	MR 19.017	6	Supplying and fixing following rating, 240 volts, double pole, "C" curve, residual current break over (RCBO) suitable for inductive load of following capacities in the existing MCB DB complete with connections, testing and commissioning etc. as required. (a) 25A, 30mA, 10 kA DP RCBO	Each	2,300.73	13,804.39
19.018	MR 19.018	356	(b) 40A, 30mA, 10 kA DP RCBO	Each	3,471.90	12,35,996.22
19.019	MR 19.019	6758	CHAPTER- 3 : CABLES AND END TERMINATIONS : Supply, Installation, Testing and Commissioning of following armoured / flexible / unarmoured cables. All the below mentioned cables shall be 1.1kV grade, XLPE insulated, FRLS type armoured cables of Al / Cu, with inner and outer PVC sheath. The said cables shall confirm IS 7098-1, BS 5467, IEC 60502-1, BS 7889 with all supplementary. The rate shall include complete cost of Supply, laying/installation, testing and commissioning including cost of conduits (wherever specified for flexible cables only), fire retardant sealant and all tools and accessories required to Complete the job in full respect. (a) 3.5C X 300 Sqmm A2XFY.	Metre	2,160.77	1,46,02,501.55
19.020	MR 19.020	7282	(b) 3.5C X 240 Sqmm A2XFY.	Metre	2,003.12	1,45,86,741.26
19.021	MR 19.021	1729	(c) 3.5C X 185 Sqmm A2XFY.	Metre	1,604.36	27,73,941.76
19.022	MR 19.022	572	(d) 3.5C X 150 Sqmm A2XFY.	Metre	1,274.62	7,29,084.04
19.023	MR 19.023	725	(f) 3.5C X 95 Sqmm A2XFY.	Metre	865.17	6,27,251.76
19.024	MR 19.024	280	(h) 3.5C X 50 Sqmm A2XFY.	Metre	527.62	1,47,733.32
19.025	MR 19.025	218	(i) 3.5C X 35 Sqmm A2XFY.	Metre	407.50	88,836.09
19.026	MR 19.026	5389	(j) 4C X 25 Sqmm A2XFY.	Metre	358.36	19,31,177.09
19.027	MR 19.027	20	(k) 4C X 16 Sqmm 2XWY.	Metre	1,203.17	24,063.45
19.028	MR 19.028	3566	(l) 4C X 10 Sqmm 2XWY.	Metre	842.43	30,04,115.01
19.029	MR 19.029	2175	(m) 4C X 6 Sqmm 2XWY.	Metre	549.39	11,94,922.64
19.030	MR 19.030	120	(n) 4C X 4 Sqmm 2XWY.	Metre	401.01	48,121.62
19.031	MR 19.031	135	(o) 4C X 16 Sqmm Cu. YY (PVC flexible cable) in a 32 mm dia medium duty PVC conduit	Metre	711.74	96,084.44
19.032	MR 19.032	1240	(p) 4C X 10 Sqmm Cu. YY (PVC flexible cable) in a 32 mm dia medium duty PVC conduit	Metre	505.86	6,27,272.14
19.033	MR 19.033	6647	(q) 4C X 6 Sqmm Cu. YY (PVC flexible cable) in a 32 mm dia medium duty PVC conduit	Metre	355.63	23,63,897.44
19.034	MR 19.034	2822	(r) 4C X 4 Sqmm Cu. YY (PVC flexible cable) in a 32 mm dia medium duty PVC conduit	Metre	286.08	8,07,324.52
19.035	MR 19.035	50	(s) 3C X 10 Sqmm 2XWY	Metre	658.82	32,940.86
19.036	MR 19.036	15	(t) 3C X 6 Sqmm 2XWY	Metre	432.54	6,488.15
19.037	MR 19.037	75	(u) 3C X 4 Sqmm 2XWY	Metre	320.33	24,025.05
19.038	MR 19.038	50	(v) 3C X 6 Sqmm Cu. YY (PVC flexible cable) in a 25 mm dia medium duty PVC conduit	Metre	276.29	13,814.50
19.039	MR 19.039	4669	(w) 3C X 4 Sqmm Cu. YY (PVC flexible cable) in a 25 mm dia medium duty PVC conduit	Metre	225.29	10,51,858.74
19.040	MR 19.040	344	(x) 3C X 2.5 Sqmm Cu. YY (PVC flexible cable) in a 25 mm dia medium duty PVC conduit	Metre	187.24	64,409.15
19.041	MR 19.041	2972	Control Cables : (bb) 2C x 2.5 sqmm cu. control cables	Metre	179.44	5,33,304.08
19.042	MR 19.042	1297	(cc) 4C x 2.5 sqmm cu. control cables	Metre	271.35	3,51,940.89
19.043	MR 19.043	224	(dd) 6C x 2.5 sqmm cu. control cables	Metre	367.40	82,296.94

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Subject :- Schedule-B (MR Items)						
Sr.no	MR Items	Total Quantity	Description	Unit	Rate	Total Amount
19.044	MR 19.044	3076	(dd) 24C x 2.5 sqmm cu. control cables	Metre	527.20	16,21,665.75
19.045	MR 19.045	42	Supplying and making and termination with double compression brass gland and aluminium lugs for following size of PVC insulated and PVC sheathed /XLPE aluminium conductor cable of 1.1 KV grade of the following sizes as required (a)3.5 X 300 Sq mm (70mm)	Each	2,892.49	1,21,484.42
19.046	MR 19.046	60	(b) 3.5C X 240 Sqmm (62mm).	Each	2,298.85	1,37,931.29
19.047	MR 19.047	34	(c) 3.5C X 185 Sqmm (57mm).	Each	1,940.27	65,969.17
19.048	MR 19.048	8	(d) 3.5C X 150 Sqmm (50mm).	Each	1,475.05	11,800.38
19.049	MR 19.049	38	(f) 3.5C X 95 Sqmm (45mm).	Each	1,106.83	42,059.68
19.050	MR 19.050	14	(h) 3.5C X 50 Sqmm (35mm).	Each	827.33	11,582.65
19.051	MR 19.051	12	(i) 3.5C X 35 Sqmm (32mm).	Each	746.59	8,959.05
19.052	MR 19.052	176	(j) 4C X 25 Sqmm (28mm).	Each	534.23	94,024.51
19.053	MR 19.053	2	Supplying and making and termination with double compression brass gland and copper lugs for following size of PVC insulated and PVC sheathed /XLPE copper conductor cable of 1.1 KV grade of the following sizes are required. (k) 4C X 16 Sqmm 2XWY.	Each	545.60	1,091.21
19.054	MR 19.054	340	(l) 4C X 10 Sqmm 2XWY.	Each	411.73	1,39,986.59
19.055	MR 19.055	214	(m) 4C X 6 Sqmm 2XWY.	Each	396.43	84,837.00
19.056	MR 19.056	12	(n) 4C X 4 Sqmm 2XWY.	Each	396.43	4,757.22
19.057	MR 19.057	82	(o) 4C X 16 Sqmm Cu. YY (PVC flexible cable) in a 32 mm dia medium duty PVC conduit	Each	545.60	44,739.41
19.058	MR 19.058	160	(p) 4C X 10 Sqmm Cu. YY (PVC flexible cable)in a 32 mm dia medium duty PVC conduit	Each	411.73	65,876.04
19.059	MR 19.059	490	(q)4C X 6 Sqmm Cu. YY (PVC flexible cable) in a 32 mm dia medium duty PVC conduit	Each	396.43	1,94,252.95
19.060	MR 19.060	188	(r)4C X 4 Sqmm Cu. YY (PVC flexible cable) in a 32 mm dia medium duty PVC conduit	Each	396.43	74,529.70
19.061	MR 19.061	6	(s) 3C X 10 Sqmm 2XWY	Each	411.73	2,470.35
19.062	MR 19.062	2	(t) 3C X 6 Sqmm 2XWY	Each	389.59	779.18
19.063	MR 19.063	4	(u) 3C X 4 Sqmm 2XWY	Each	389.59	1,558.35
19.064	MR 19.064	6	(v) 3C X 6 Sqmm Cu. YY (PVC flexible cable) in a 25 mm dia medium duty PVC conduit	Each	389.59	2,337.53
19.065	MR 19.065	482	(w) 3C X 4 Sqmm Cu. YY (PVC flexible cable) in a 25 mm dia medium duty PVC conduit	Each	382.59	1,84,407.36
19.066	MR 19.066	80	(x) 3C X 2.5 Sqmm Cu. YY (PVC flexible cable) in a 25 mm dia dia medium duty PVC conduit	Each	382.59	30,607.03
19.067	MR 19.067	398	Control Cables : (bb)2C x 2.5 sqmm cu. control cables	Each	322.19	1,28,229.84
19.068	MR 19.068	142	(cc)4C x 2.5 sqmm cu. control cables	Each	331.21	47,031.87
19.069	MR 19.069	32	(dd) 6C x 2.5 sqmm cu. control cables	Each	340.24	10,887.53
19.070	MR 19.070	312	(dd) 24C x 2.5 sqmm cu. control cables	Each	567.20	1,76,965.60
19.071	MR 19.071	1960	CHAPTER- 4 : CABLE TRAYS AND RACEWAYS : Supplying and installing following size of perforated hot dip galvanized G.I cable tray, with galvanizing thickness of 65 micron with perforations not more than 17.5%, in convenient sections, joined with connectors, suspended from ceiling with G.I suspenders including bolts and nuts, etc. as required. (a)100 mm width x 50 mm depth x 1.6 mm thickness	Metre	382.88	7,50,439.23
19.072	MR 19.072	655	(C)300 mm width x 50 mm depth x 1.6 mm thickness	Metre	599.26	3,92,514.55
19.073	MR 19.073	878	(d)600 mm width x 50 mm depth x 2 mm thickness	Metre	1,134.91	9,96,451.12
19.074	MR 19.074	380	(e)900 mm width x 62.5 mm depth x 2 mm thickness	Metre	1,595.63	6,06,338.43
19.075	MR 19.075	284	CHAPTER- 5 : EARTHING AND LIGHTNING PROTECTION Supply, installation, connections, testing & commissioning of 17.2 mm dia. rod of 3 meter length having copper bonding of 250 micron, along with 5 kg of maintenance free ground enhancing compound & shall comply as per IEEE 80:2000 Clause 14.5d with fused rod to tape clamp for interconnection of strip from earth pit to equipment.	Each	9,126.98	25,92,060.90
19.076	MR 19.076	300	Supplying and laying 32mm x 6 mm GI strip at at 0.50 metre below ground as strip earth electrode including connections / terminating with GI nut, bolts, spring, washer etc. as required (Jointing shall be done by overlapping and with 2 set of G.I nut bolt and spring washer spaced at 50mm).	Metre	161.11	48,333.23

Name of Work :- Development Of Permanent Campus Of Nu Rajgir.						
Subject :- Schedule-B (MR Items)						
Sr.no	MR Items	Total Quantity	Description	Unit	Rate	Total Amount
19.077	MR 19.077	1	CHAPTER- 6 : UPS Design, supply, Installation testing and commissioning of following size and configuration IGBT based UPS system as per the said specifications with inbuilt isolation transformer as per kVA rating with a battery backup of 30 minutes. (12 volt battery comprising of 2 V cells) (a) 5kVA single phase input single phase output	Set	2,21,138.95	2,21,138.95
19.078	MR 19.078	725	CHAPTER- 7 : CIVIL AND MISC WORKS Providing all materials and constructing required clear sized cable trench as per detailed drawings including necessary excavation, 230 mm thick rubble soling, 100 mm thick PCC 1:4:8, RCC M25 base slab and Walls and precast RCC cover 100 mm mm thick as per drawing, inclusive of necessary Formwork and Reinforcement complete as directed by Engineer - in Charge. (a) 1.2 M Wide x 1 M Depth	Rmt.	20,097.62	1,45,70,775.58
19.079	MR 19.079	307	(e) 0.6 M Wide x 1 M Depth	Rmt.	16,016.01	49,16,915.55
19.080	MR 19.080	1080	Supplying and laying of following size flexible high density polyethene (HDPE) corrugated pipes along with water tight joints at a depth of 450 mm from ground level. 100mm thick PCC all around the pipes , excavation, refilling of the trenches shall be paid separately under relevant items. (a) 100 mm diameter	Metre	342.95	3,70,388.81
19.081	MR 19.081	1233	(b) 300 mm diameter	Metre	511.24	6,30,359.37
19.082	MR 19.082	217	Providing & laying of following 150mm dia PVC pipe (medium duty Sleeve) including chasing, coupler / socket, and sealing of both ends in an approved manner complete as required. 100mm thick PCC all around the pipes , excavation, refilling of the trenches shall be paid separately under relevant items.	Metre	842.67	1,82,859.30
19.083	MR 19.083	217	Providing & laying of following 450mm dia PVC pipe (medium duty Sleeve) including chasing, coupler / socket, and sealing of both ends in an approved manner complete as required. 100mm thick PCC all around the pipes , excavation, refilling of the trenches shall be paid separately under relevant items.	Metre	2,023.64	4,39,129.08
19.084	MR 19.084	226	Supply & Erection of metallic pole of following length over existing foundation with required foundation bolts along with loop in loop out fibre boxes made up of 1.6 mm thick fibre (300mm x 300mm) suitable for Al armoured cable complete with 50A aluminium bus bar inside the box. The box shall have lockable doors made up of fibre. The poles shall be octagonal made up of 3mm thick MS complete with base plates, nut and bolts and bracket arm suitable for mounting the selected fixture etc. complete as required. Cost of foundation and foundation bolts will be paid separately under relevant items. (a) Above 4.5 metre and up to 6.5 metre Base plate size : 200mm x 200mm x 12mm Top dia :70mm Bottom dia : 130mm single sided bracket arm suitable for fixture to be mounted.	Each	9,245.19	20,89,413.60
19.085	MR 19.085	70	(b) Above 6.5 metre and up to 8 metre. Base plate size : 225mm x 225mm x 16mm Top dia :70mm Bottom dia : 135mm single sided bracket arm suitable for fixture to be mounted.	Each	17,376.27	12,16,338.86
19.086	MR 19.086	30	(c) Above 8 metre and up to 10 metre. Base plate size : 275mm x 275mm x 16mm Top dia :70mm Bottom dia : 175mm single sided bracket arm suitable for fixture to be mounted.	Each	22,187.35	6,65,620.60
19.087	MR 19.087	248	Providing & fixing in position 1000 mm wide , Electrical Insulating Rubber Mats as per IS 15652:2006, 2 mm thick, suitable up to 1.1 KV , fire retardant, no effect of acids, alkalis and transformer oils, moisture proof, high tensile strength and texture finish / cloth impression (Anti slip , marking on top)	Each	1,665.00	4,12,920.00
19.088	MR 19.088	127	Supply & fixing in position approved shock treatment chart written in English Hindi and Local language. These charts shall be framed in wooden frame & covered with clear glass	Each	136.58	17,345.37
19.089	MR 19.089	43	Supply of Tool & First Aid Box with all necessary tools for maintenance of electrical installation & First aid.	Each	638.49	27,455.01
19.090	MR 19.090	15	(a1) 1x12W Underwater Light	Each	134.13	2,011.95
19.091	MR 19.091	30	(d1) 65W LED Pole Mounted Light (IP65)	Each	167.66	5,029.87

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Subject :- Schedule-B (MR Items)						
Sr.no	MR Items	Total Quantity	Description	Unit	Rate	Total Amount
19.092	MR 19.092	296	(e1) 45W LED Post Top Light (IP65)	Each	150.90	44,665.20
19.093	MR 19.093	1914	(o) Supplying Ceiling Fan 1200mm sweep complete with capacitor starting assembly, stiff pendent for hanging and wiring from connector / ceiling rose to fan complete with good finish and well painted from factory.	Each	2,069.13	39,60,310.11
19.094	MR 19.094	17	(o) Supplying Wall Fan complete with all accessories suitable for wall hanging and wiring from connector / ceiling rose to fan complete with good finish and well painted from factory.	Each	1,985.06	33,745.98
19.095	MR 19.095	1	CHAPTER- 9 : LT PANELS, SWITCHGEARS AND METERS : Design , fabrication, wiring, Supply, Installation, Testing and Commissioning of following Wall mounted / Floor mounted(including base stand), 415V,3PH, 50Hz extensible and fully compartmentalized panels complying to IS 8623/93. The indoor panels shall be IP 42 and outdoor panels shall be IP 66 type. The Panel shall have proper space with required clearance for cables, incoming / outgoing switchgear, CTs, PTs, Ammeter, Voltmeter, selector switches, Phase wise indicating lamps, and shall be Insulated and properly supported compartmentalized bus bars with heat shrinkable sleeves along with the other control circuit accessories within the panel and any other electrical component mentioned in the Panel SLD. The panel shall be fabricated out of CRCA sheet not less than 2.0 mm thick for load bearing members and 1.6mm for the doors of LT panel. The Panel shall undergo seven tank pre treatment process comprising of degreasing, rinsing, de-rusting, rinsing, phosphatising, rinsing and passivation followed by powder coat painting having a paint thickness of 60 microns or as specified. The Panel shall be Dust/Vermin proof with earth studs as per the SLD and specifications . All the digital meters, multifunction meters shall be communicable with communication port available Feeder Panel-1 (Outdoor Type) Incomer : 1 x 630A , 25kA, FP, MCCB 3 x 630/5A, CL-1, 15VA, Ring type CT 1 x 0-630A & 0-500V Multifunction meter Bus Bar : 800A, 25kA, TPN, Al Bus bar. Outgoing : 2 x 400A , 25kA, FP, MCCB 1 x 630A , 25kA, FP, MCCB 2 x 63A, 10kA, FP, C Curve MCB with astronomical switch for external lighting	Set	3,63,030.22	3,63,030.22
19.096	MR 19.096	5	METERING PANEL-1B (Indoor Type) Incomer : Surge arrester 1.6kVp, 75kA with both lightning and switching surge protection protected by MCCB of suitable rating and response with a surge counter. R,Y,B LED indication lamp with 2A control MCB. 0-500V Analogue type voltmeter with selector switch. 400 Amp, FP, 36kA, MCCB (Microprocessor based) , with inbuilt LSIG protection. 3 x (1 x 400/5A,CL-1, 15VA CTs and 0-400A,500V Multifunction meter with inbuilt selector switch) . Bus bar: 500A, FP, 36kA, Al bus bar. 400 Amp MCCB bus coupler (with NO+NC and shunt trip coil) Outgoings : 8 x (40 Amp, 36kA, FP, MCCB with 3 x 40/5A,CL-1, 5VA CTs and 0-40A,500V dual source energy meter with inbuilt selector switch) . 2 x (40 Amp, 36kA, FP, MCCB) 2 x (63Amp, 36kA, FP, MCCB with 3 x 60/5A,CL-1, 5VA CTs and 0-60A,500V dual source energy meter with inbuilt selector switch) . 1 x (63 Amp, 36kA, FP, MCCB) 1 x (100Amp, 36kA, FP, MCCB with 3 x 100/5A,CL-1, 15VA CTs and 0-100A,500V dual source energy meter with inbuilt selector switch) . 1 x (100Amp, 36kA, FP, MCCB)	Set	8,96,179.59	44,80,897.95

Name of Work :- Development Of Permanent Campus Of Nu Rajgir.								
Subject :- Schedule-B (MR Items)								
Sr.no	MR Items	Total Quantity	Description	Unit	Rate	Total Amount		
19.097	MR 19.097	5	HVACPANEL-1B (Outdoor Type) Incomer : Surge arrester 1.6kVp, 75kA with both lightning and switching surge protection protected by MCCB of suitable rating and response with a surge counter. R,Y,B LED indication lamp with 2A control MCB. 0-500V Analogue type voltmeter with selector switch. 125 Amp, FP, 36kA, MCCB (Microprocessor based) , with inbuilt LSIG protection. 3 x (1 x 125/5A,CL-1, 15VA CTs and 0-125A,500V Multifunction meter with inbuilt selector switch). Bus bar: 200A, FP, 36kA, Al bus bar. Outgoings : 4 x 13kW star delta starter , 32A 36 kA, FP, MPCB with OLR range 12.5-20A, 38A delta contactor and 16A star contactor. 2 x (32Amp, 36kA, FP, MCCB)	Set	4,22,933.17	21,14,665.86		
19.098	MR 19.098	7	METERING PANEL-T2 (Indoor Type) Incomer : Surge arrester 1.6kVp, 75kA with both lightning and switching surge protection protected by MCCB of suitable rating and response with a surge counter. R,Y,B LED indication lamp with 2A control MCB. 0-500V Analogue type voltmeter with selector switch. 400 Amp, FP, 36kA, MCCB (Microprocessor based) , with inbuilt LSIG protection. 3 x (1 x 400/5A,CL-1, 15VA CTs and 0-400A,500V Multifunction meter with inbuilt selector switch). Bus bar: 500A, FP, 36kA, Al bus bar. 400 Amp MCCB bus coupler (with NO+NC and shunt trip coil) Outgoings : 1 x (1000 Amp, FP, 36kA, EDO type ACB with 4Nos. 1000/5A, CL-1 8 x (40 Amp, 36kA, FP, MCCB with 3 x 40/5A,CL-1, 5VA CTs and 0-40A,500V dual source energy meter with inbuilt selector switch). 2 x (63 Amp, 36kA, FP, MCCB) 2x (125Amp, 36kA, FP, MCCB with 3 x 125/5A,CL-1, 15VA CTs and 0-125A,500V dual source energy meter with inbuilt selector switch). 1 x (125Amp, 36kA, FP, MCCB)	Set	8,34,534.21	58,41,739.50		
19.099	MR 19.099	7	HVACPANEL-T2 (Outdoor Type) Incomer : Surge arrester 1.6kVp, 75kA with both lightning and switching surge protection protected by MCCB of suitable rating and response with a surge counter. R,Y,B LED indication lamp with 2A control MCB. 0-500V Analogue type voltmeter with selector switch. 125 Amp, FP, 36kA, MCCB (Microprocessor based) , with inbuilt LSIG protection. 3 x (1 x 125/5A,CL-1, 15VA CTs and 0-125A,500V Multifunction meter with inbuilt selector switch). Bus bar: 150A, FP, 36kA, Al bus bar. Outgoings : 4 x 23.4kW star delta starter , 63A 36 kA, FP, MPCB with OLR range 20-32A, 75A delta contactor and 32A star contactor. 1 x (63Amp, 36kA, FP, MCCB)	Set	4,67,329.84	32,71,308.89		

Name of Work :- Development Of Permanent Campus Of Nu Rajgir.								
Subject :- Schedule-B (MR Items)								
Sr.no	MR Items	Total Quantity	Description	Unit	Rate	Total Amount		
19.100	MR 19.100	7	<p>METERING PANEL-T3 (Indoor Type) Incomer : Surge arrester 1.6kVp, 75kA with both lightning and switching surge protection protected by MCCB of suitable rating and response with a surge counter. R,Y,B LED indication lamp with 2A control MCB. 0-500V Analogue type voltmeter with selector switch. 400 Amp, FP, 36kA, MCCB (Microprocessor based) , with inbuilt LSIG protection. 3 x (1 x 400/5A,CL-1, 15VA CTs and 0-400A,500V Multifunction meter with inbuilt selector switch). Bus bar: 500A, FP, 36kA, Al bus bar. 400 Amp MCCB bus coupler (with NO+NC and shunt trip coil) Outgoings : 1 x (1000 Amp, FP, 36kA, EDO type ACB with 4Nos. 1000/5A, CL-1 8 x (40 Amp, 36kA, FP, MCCB with 3 x 40/5A,CL-1, 5VA CTs and 0-40A,500V dual source energy meter with inbuilt selector switch). 2 x (63 Amp, 36kA, FP, MCCB) 2x (100Amp, 36kA, FP, MCCB with 3 x 100/5A,CL-1, 10VA CTs and 0-125A,500V dual source energy meter with inbuilt selector switch). 1 x (100Amp, 36kA, FP, MCCB)</p>	Set	8,12,485.87	56,87,401.07		
19.101	MR 19.101	7	<p>HVACPANEL-3 (Outdoor Type) Incomer : Surge arrester 1.6kVp, 75kA with both lightning and switching surge protection protected by MCCB of suitable rating and response with a surge counter. R,Y,B LED indication lamp with 2A control MCB. 0-500V Analogue type voltmeter with selector switch. 100 Amp, FP, 36kA, MCCB (Microprocessor based) , with inbuilt LSIG protection. 3 x (1 x 100/5A,CL-1, 10VA CTs and 0-100A,500V Multifunction meter with inbuilt selector switch). Bus bar: 200A, FP, 36kA, Al bus bar. Outgoings : 4 x 15kW star delta starter , 32A 36 kA, FP, MPCB with OLR range 12.5-20A, 38A delta contactor and 16A star contactor. 2 x (32Amp, 36kA, FP, MCCB)</p>	Set	4,21,133.31	29,47,933.14		
19.102	MR 19.102	1	<p>Feeder Panel-2 (Outdoor Type) Incomer : 1 x 400A , 25kA, FP, MCCB 3 x 400/5A, CL-1, 15VA, Ring type CT 1 x 0-400A & 0-500V Multifunction meter Bus Bar : 500A, 25kA, TPN, Al Bus bar. Outgoing : 9 x 63A , 25kA, FP, MCCB 1 x 400A , 25kA, FP, MCCB 2 x 63A, 10kA, FP, C Curve MCB with astronomical switch for external lighting</p>	Set	3,97,527.63	3,97,527.63		
19.103	MR 19.103	1	<p>Feeder Panel-3 (Outdoor Type) Incomer : 1 x 630A , 25kA, FP, MCCB 3 x 400/5A, CL-1, 15VA, Ring type CT 1 x 0-400A & 0-500V Multifunction meter Bus Bar : 500A, 25kA, TPN, Al Bus bar. Outgoing : 4 x 400A , 25kA, FP, MCCB 1 x 630A , 25kA, FP, MCCB 2 x 63A, 10kA, FP, C Curve MCB with astronomical switch for external lighting</p>	Set	4,76,121.74	4,76,121.74		

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Subject :- Schedule-B (MR Items)						
Sr.no	MR Items	Total Quantity	Description	Unit	Rate	Total Amount
19.104	MR 19.104	1	Feeder Panel-4 (Outdoor Type) Incomer : 1 x 400A , 25kA, FP, MCCB 3 x 400/5A, CL-1, 15VA, Ring type CT 1 x 0-400A & 0-500V Multifunction meter Bus Bar : 500A, 25kA, TPN, Al Bus bar. Outgoing : 7 x 63A , 25kA, FP, MCCB 1 x 400A , 25kA, FP, MCCB 2 x 63A, 10kA, FP, C Curve MCB with astronomical switch for external lighting	Set	3,67,529.88	3,67,529.88
19.105	MR 19.105	1	Feeder Panel-5 (Outdoor Type) Incomer : 1 x 800A , 25kA, FP, MCCB 3 x 800/5A, CL-1, 15VA, Ring type CT 1 x 0-800A & 0-500V Multifunction meter Bus Bar : 1000A, 25kA, TPN, Al Bus bar. Outgoing : 5 x 400A , 25kA, FP, MCCB 1 x 800A , 25kA, FP, MCCB 2 x 63A, 10kA, FP, C Curve MCB with astronomical switch for external lighting	Set	7,09,504.23	7,09,504.23
19.106	MR 19.106	2	Feeder Panel-6,8 (Outdoor Type) Incomer : 1 x 400A , 25kA, FP, MCCB 3 x 400/5A, CL-1, 15VA, Ring type CT 1 x 0-400A & 0-500V Multifunction meter Bus Bar : 500A, 25kA, TPN, Al Bus bar. Outgoing : 8 x 63A , 25kA, FP, MCCB 1 x 400A , 25kA, FP, MCCB 2 x 63A, 10kA, FP, C Curve MCB with astronomical switch for external lighting	Set	3,82,528.76	7,65,057.51
19.107	MR 19.107	1	Feeder Panel-7 (Outdoor Type) Incomer : 1 x 1000A , 36kA, FP, ACB 3 x 1000/5A, CL-1, 15VA, Ring type CT 1 x 0-1000A & 0-500V Multifunction meter Bus Bar : 1000A, 25kA, TPN, Al Bus bar. Outgoing : 6 x 400A , 25kA, FP, MCCB 1 x 800A , 25kA, FP, MCCB 2 x 63A, 10kA, FP, C Curve MCB with astronomical switch for external lighting	Set	7,92,598.00	7,92,598.00
19.108	MR 19.108	1	Feeder Panel-9 (Outdoor Type) Incomer : 1 x 630A , 25kA, FP, MCCB 3 x 600/5A, CL-1, 15VA, Ring type CT 1 x 0-630A & 0-500V Multifunction meter Bus Bar : 800A, 25kA, TPN, Al Bus bar. Outgoing : 3 x 400A , 25kA, FP, MCCB 1 x 630A , 25kA, FP, MCCB 2 x 63A, 10kA, FP, C Curve MCB with astronomical switch for external lighting	Set	4,11,926.55	4,11,926.55
19.109	MR 19.109	1	Feeder Panel-10 (Outdoor Type) Incomer : 1 x 400A , 25kA, FP, MCCB 3 x 400/5A, CL-1, 15VA, Ring type CT 1 x 0-400A & 0-500V Multifunction meter Bus Bar : 500A, 25kA, TPN, Al Bus bar. Outgoing : 10 x 63A , 25kA, FP, MCCB 1 x 400A , 25kA, FP, MCCB 2 x 63A, 10kA, FP, C Curve MCB with astronomical switch for external lighting	Set	4,82,871.23	4,82,871.23

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Subject :- Schedule-B (MR Items)						
Sr.no	MR Items	Total Quantity	Description	Unit	Rate	Total Amount
19.110	MR 19.110	41	Building Metering Panel (Indoor Type) Incomer : 1 x 100A , 25kA, FP, MCCB 3 x 100/5A, CL-1, 15VA, Ring type CT 1 x 0-100A & 0-500V Multifunction meter Bus Bar : 200A, 25kA, TPN, Al Bus bar with 1 x 100A , 25kA, FP , MCCB bus coupler Outgoing : 9 x 63A, 10kA, DP, C Curve MCB 7 x 63A, 10kA, FP, C Curve MCB	Set	1,17,026.33	47,98,079.48
19.111	MR 19.111	4	Feeder Panel (Indoor Type)(For Cluster1,3,4,5) Incomer : 1 x 400A , 25kA, FP, MCCB 3 x 400/5A, CL-1, 15VA, Ring type CT 1 x 0-400A & 0-500V Multifunction meter Bus Bar : 500A, 25kA, TPN, Al Bus bar. Outgoing : 9 x 100A , 25kA, FP, MCCB 3 x 63A, 10kA, FP, C Curve MCB with astronomical switch for external lighting	Set	3,68,129.84	14,72,519.34
19.112	MR 19.112	2	Feeder Panel (Indoor Type)(For Cluster 2,6) Incomer : 1 x 400A , 25kA, FP, MCCB 3 x 400/5A, CL-1, 15VA, Ring type CT 1 x 0-400A & 0-500V Multifunction meter Bus Bar : 500A, 25kA, TPN, Al Bus bar. Outgoing : 7 x 100A , 25kA, FP, MCCB 3 x 63A, 10kA, FP, C Curve MCB with astronomical switch for external lighting	Set	3,37,532.13	6,75,064.26
19.113	MR 19.113	41	KWH METERS CT OPERATED Supply, installation & wiring Three phase electronic CT Operated dual source meter, with communication port suitable for 415 Volts, 50 Hz, up to 50 KW connection with display of LCD backlit, Measurements of kWh / kW and Time of Day feature. (The rate shall also include the item required for fixing meter i.e.. wooden ply, nuts, bolts and all other accessories required to complete the job in full respect.)	No	29,870.10	12,24,674.10
19.114	MR 19.114	130	Supplying and fixing IP-55 rated, CRCA enclosure 2mm thick for load bearing members and 1.6 mm thick for doors, suitable for fixing MCBs of & upto 100A FP, size and Isolators, complete with making cut outs and holes in the enclosure, fixing with nut, bolts, making enclosure air tight, fixing supports etc. as required but excluding the cost of MCB and Isolator	Set	5,233.65	6,80,374.50
19.115	MR 19.115	20	Supplying and fixing 400mm x 400mm x 150 mm IP-55 rated, CRCA enclosure 2mm thick, for load bearing members and 1.6 mm thick for doors, suitable for fixing earth bus bars of size 32 x 6 mm GI, complete with making cut outs and holes in the enclosure, fixing with nut, bolts, making enclosure air tight, fixing supports etc. as required.	Set	7,255.63	1,45,112.52
19.116	MR 19.116	117	Supplying and fixing 100mm x 100mm x 50 mm GI adapter box, with cover plate made up of same finish to be used as a junction between raceways and conduits, bus bars and cables, conduits and conduits complete with making cut outs and holes in the box, fixing with nut, bolts, fixing supports etc. as required.	Set	6,254.85	7,31,817.45
120			Subtotal of Electrical work			13,07,76,354
	20		Elevators			
20.001	MR- 20.001 .	19	Supply, installation, testing and commissioning of vertical transportation system (Passenger Lift, refer technical specs) with machine of capacity as mentioned in technical specifications (13 passengers / persons) Simplex and at a speed of a 1.0 mp, including all necessary ancillaries and accessories as specified in the tender documents. It shall complying with all Statutory requirements of the local competent Authorities and IS-14665. The lift / elevator shall be suitable for landing at total 4 stops and 4 opening .(approximate travel distance 9.90 Mt.) Faculty Apartment	Nos	28,98,710.61	5,50,75,502

Name of Work :- Development Of Permanent Campus Of Nu Rajgir.						
Subject :- Schedule-B (MR Items)						
Sr.no	MR Items	Total Quantity	Description	Unit	Rate	Total Amount
20.002	MR- 20.002 .	1	Preparation of necessary Drawings, getting approval from the statutory authorities before taking up work and to furnish Completion Report arranging for Inspection, giving trial run on with load, obtaining approval for commissioning the sets by paying necessary fee for inspection, etc., complete for all passengers and goods lifts. (Necessary statutory fees will be reimbursed to the Contractor after producing the receipts).	Nos	5,15,706.00	5,15,706.00
2			Subtotal of Elevators			5,55,91,207.59
	21		Horticulture & landscaping Work			
21.001	MR 21.001	233	Providing and laying non-pressure NP2 class (light duty) R.C.C. pipes vertically in tree-pits complete as directed by EIC including supply of all material, labour and equipment up to any lead and lift, 900mm dia RCC pipe	Rmt	2,009.10	4,68,120
21.002	MR 21.002	482	Supply & application of bentonite clay lining with average thickness of 75mm to bottom & sides surfaces of water bodies, clearing and levelling the surface before application of bentonite using a 500kg roller such that no part of the surface extends out from surroundings by more than 100mm, rolling & consolidating after application with 500kg roller, checking for leaks by local filling of water and sealing the same with bentonite complete, including supply of all material, labour and equipment as required, up to any lead and lift; as directed by Engineer-in-Charge	Cum	4,654.23	22,43,339
21.003	MR 21.003	452	Supply & spreading of graded moorum up to 300 mm for play areas, in layers not exceeding 100mm thick and consolidating with 8 tonne roller, complete including supply of all material, labour and equipment, up to any lead and lift as directed by EIC	Cum	246.50	1,11,416
21.004	MR 21.004	8	Supply, fabrication and installation of play structure comprising of SS 304 slide for children, wooden deck, ladders, Nylon rope climbing net, Pergola house and the supporting structure of all the components as per final detailed drawing. The rate to include necessary painting of MS structures with approved colour Epoxy paint and all wooden members to be applied with PU coating etc. complete including all labour, equipment, material, up to any lead and lift as directed by EIC	nos	2,78,856.45	22,30,852
4			Subtotal of Horticulture & landscaping Work			50,53,727
	22		Road work			
22.001	MR- 22.001 .	3730	Providing and laying factory made chamfered edge Cement Concrete paver blocks of required strength, thickness & size/shape, made by table vibratory method, to attain superior smooth finish using PU or equivalent moulds, laid in required Grey colour & pattern over 50mm thick compacted bed of coarse sand, compacting and proper embedding / laying of inter locking paver blocks into the sand bedding layer through vibratory compaction by using plate vibrator, filling the joints with coarse sand and cutting of paver blocks as per required size and pattern, finishing and sweeping extra sand in footpath, parks, lawns, drive ways or light traffic parking etc. all complete as per manufacturer's specifications & direction of Engineer -in-Charge: (a) 80 mm thick c.c. paver block of M-30 grade with approved colour design and pattern.	Sqm	818.85	30,54,299
1			Subtotal of Road work			30,54,299