

NAME OF WORK :- Upgradation & Construction of multi outdoor sports facilities at Gandhidham District Sport Complex, Kutch.			
Separate Specification Sheet			
Sr. No.	Item of Work	Unit	Specification as per General Specification book aprooved by R&B Department for Building uploaded here with/Separate Sheet Attached
1	Dismantling of existing chain link fencing including dismantling all MS post, frame and structure including all earth work concrete in base and making good the disturbed ground stacking useful materials as directed and disposing as directed and disposing of the unserviceable materials with all lead and lift.	Rmt	Separate Specification Sheet Attached
2	Demolition of R.C.C. work for base of fencing and trench including removing reinforcement and stacking of serviceable materilas and disposal of unserviceable materials with all lead and lift.	Cum	Separate Specification Sheet Attached
3	Dismantling steel work including distempering and stacking the materials with all lead and lift.	Kg	Separate Specification Sheet Attached
4	Dismantling the existing pole above 6 m height with brackets, clamps, insulators, stay from the cement concrete foundation and making the site clear by refilling the pits with excavated materials and bringing it to the ground level.	Each	Separate Specification Sheet Attached
5	Clearing and grubbing road land including uprooting rank vegetation grass bushes,shrubs,sapling and trees girth up to 300 mm removal of stumps of trees cut earlier and disposal of unserviceable materials (C) By mechanical means in area of light jungle	Hec	Separate Specification Sheet Attached
6	Excavation for foundation upto 1.5 m depth including sorting out and stacking of useful materials and disposing off the excavated stuff upto 50 Meter lead.(A) Loose or soft soil	Cum	Separate Specification Sheet Attached
7	Excavation for foundation for depth from 1.5 m to 3.0 m including sorting out and stacking of useful materials and disposing off the excavated stuff upto 50 Meter lead.(B) Dense or Hard soil	Cum	Separate Specification Sheet Attached
8	Filling available excavated earth (excluding rock) in trenches. plinth, sides of foundations etc. in layers not exceeding 20 cm. in depth consolidating each disposed layer by ramming and watering.	Cum	Separate Specification Sheet Attached
9	Filling in foundation and plinth with murrum or selected soil in layers of 20cm. thickness including watering, ramming and consolidating etc. complete.	Cum	Separate Specification Sheet Attached
10	Filling in plinth with sand under floors including watering ramming, consolidating and dressing complete	Cum	Separate Specification Sheet Attached
11	Disposing of the surplus excavated earth, debris etc. including loading (anywhere from site), transporting by mechanical or manual means & disposal, unloading out side the site at unobjectionable place with 5.0 km leads and all lifts etc. complete as directed by engineer in charge.	Cum	Separate Specification Sheet Attached
12	Carring out plinth treatment to post construction / existing structure by spraying chemical solution for termite control treatment including labour and material consistment with I.S.I specification. Using Chlordene and Chiorpurfiles 20 EC. As Per 6131_paret-II Consentration Weight one percent is recommended i.e one litre 20 EC chemical emulsion with 19 liter give 1 % concentration inclusive of one litre chemical emulsion appication at the rate of 5 Litre chemical / Sqm of surface is recommended as per I.S	Sqm	Separate Specification Sheet Attached
13	P.C.C : Providing and laying cement concrete 1:2:4 (1-Cement : 2- Coarse sand : 4- graded stone aggregates 20 mm nominal size) and curing complete including cost of formwork in (A) Foundation and Plinth	Cum	Separate Specification Sheet Attached
14	GRADE SLAB (M200) : Providing and laying controlled cement concrete M.200 Concrete with all lead, including all transportation, pumping, pouring, curing of concrete etc complete including the cost of formwork but excluding the cost of reinforcement for reinforced concrete work in M200 Grade Slab	Cum	Separate Specification Sheet Attached
15	Providing and laying controlled cement concrete M.250 concrete With all lead, including all transportation, pumping, pouring, curing of concrete etc complete including the cost of formwork but excluding the cost of reinforcement for reinforced concrete work in M250 all RCC element like foundation, (A) Footing, at all floor level from below plinth and above plinth level	Cum	Separate Specification Sheet Attached
16	Providing and laying controlled cement concrete M.250 concrete With all lead, including all transportation, pumping, pouring, curing of concrete etc complete including the cost of formwork but excluding the cost of reinforcement for reinforced concrete work in M250 all RCC element lik, @ Slabs , landing, shelves, Balconies, Girders and Cantilever all floor level.	Cum	Separate Specification Sheet Attached
17	Providing and laying controlled cement concrete M.250 concrete With all lead, including all transportation, pumping, pouring, curing of concrete etc complete including the cost of formwork but excluding the cost of reinforcement for reinforced concrete work in M250 all RCC element lik @ Slabs , landing, shelves, Balconies, Lintels, Beams , Girders and Cantilever all floor level.	Cum	Separate Specification Sheet Attached
18	Providing and laying controlled cement concrete M.250 concrete With all lead, including all transportation, pumping, pouring, curing of concrete etc complete including the cost of formwork but excluding the cost of reinforcement for reinforced concrete work in M250 all RCC element lik @ Landing, Stair case, Lintels , Copping, Beams, Girders, shelves,Balconies, and Cantilever all floor level.	Cum	Separate Specification Sheet Attached
19	Providing and laying controlled cement concrete M.250 concrete With all lead, including all transportation, pumping, pouring, curing of concrete etc complete including the cost of formwork but excluding the cost of reinforcement for reinforced concrete work in M250 all RCC element lik (D) Columns , Pillars posts and struts, all floor level.	Cum	Separate Specification Sheet Attached
20	Providing and laying controlled cement concrete M.300 concrete With all lead, including all transportation, pumping, pouring, curing of concrete etc complete including the cost of formwork but excluding the cost of reinforcement for reinforced concrete work in M300 all RCC element like foundation, (A) Footing, at all floor level from below plinth and above plinth level	Cum	Separate Specification Sheet Attached
21	Providing and laying controlled cement concrete M.300 concrete With all lead, including all transportation, pumping, pouring, curing of concrete etc complete including the cost of formwork but excluding the cost of reinforcement for reinforced concrete work in M300 all RCC element lik, @ Slabs , landing, shelves, Balconies, Girders and Cantilever all floor level.	Cum	Separate Specification Sheet Attached
22	Providing and laying controlled cement concrete M.300 concrete With all lead, including all transportation, pumping, pouring, curing of concrete etc complete including the cost of formwork but excluding the cost of reinforcement for reinforced concrete work in M300 all RCC element lik @ Slabs , landing, shelves, Balconies, Lintels, Beams , Girders and Cantilever all floor level.	Cum	Separate Specification Sheet Attached
23	Providing and laying controlled cement concrete M.300 concrete With all lead, including all transportation, pumping, pouring, curing of concrete etc complete including the cost of formwork but excluding the cost of reinforcement for reinforced concrete work in M300 all RCC element lik (D) Columns , Pillars posts and struts, all floor level.	Cum	Separate Specification Sheet Attached

NAME OF WORK :- Upgradation & Construction of multi outdoor sports facilities at Gandhidham District Sport Complex, Kutch.			
Separate Specification Sheet			
Sr. No.	Item of Work	Unit	Specification as per General Specification book aprooved by R&B Department for Building uploaded here with/Separate Sheet Attached
24	Providing TMT Bar FE 500D reinforcement for R.C.C. work including bending, binding and placing in position complete upto floor two level	Kg	Separate Specification Sheet Attached
25	Brick work using common burnt clay building bricks having crushing strength not less than 35 kg./Sq.Cm. in foundation and plinth in Cement Mortar 1:5. (1- Cement : 5 -fine sand)(B) Conventional	Cum	Separate Specification Sheet Attached
26	Brick work using common burnt clay building bricks having crushing strength not less than 35 kg./Sq.Cm. in superstructure above plinth level upto floor two level in Cement Mortar 1:5. (1- Cement : 5 -fine sand)(B) Conventional	Cum	Separate Specification Sheet Attached
27	(i) Half brick masonry in common brunt clay building bricks having crushing strength not less than 35 Kg/Sq.Cm. in Cement mortar 1:4 (1- Cement : 4 -coarse sand) iin superstructure above plinth level upto floor two level (B) Conventional	Sqm	Separate Specification Sheet Attached
28	White Stone Bela mesonry block in course in superstructure with stone of approved quality in Lime Mortar 1:6 (1- Cement : 6- coarse sand) including packing the joints etc. complete.	Cum	Separate Specification Sheet Attached
29	Flush Door With WPC frame : Providing and fixing in position 35mm thick solid core wooden flush doors of approved make having fire retardant ply facing on both sides and finished with 1 mm thick laminate as approved, WPC frame size - 125 X 63 MM Well Quality Hardware system of Hinges, Boxer type door closer, Door handle, Euro profile lock, Door stop. work complete including all type of hardware, fittings, fixtures etc complete as per detailed drawings and specifications, sample mock shall be approved from EIC.	Sqm	Separate Specification Sheet Attached
30	Internal toilet door WPC shutter + WPC frame + Hardware Provoding and fixing approximate 30mm thick WPC door shutter of approved make and shade, solid core construction with WPC door frame of 70 to 100mm in size with single rebate for door shutter with required number of anchor fastener of approved make and size. All surface of shutter and frame shall be finished with paint in required coat and of approved make and shade. Door shutter shall be with SS 304 grade butt hinges (3 no as per door size), tower bolt, both side aldrop, pair of handle of required size (150mm to 200mm long). All sample shall be approved before execution.	Sqm	Separate Specification Sheet Attached
31	Providing and fixing factory made upvc fenesta wooden colour sliding glazed window with Mosquito net and Approved sample by Architect/ Client/ EIC. all height dimension comprising of upvc multi chambered frame with in built roller track and sash extruded profiles duly reinforced with 1.60 + 0.2 mm thick galvanizd mild steel section made from roll forming process of required lenght (shape & size according to upvc profile), appropriate dimension of upvc extruded glazing beads and upvc extruded interlocks, epdm gasket,wool pile,zinc alloy (white powder coated) touch locks with hook, zinc alloy body with single nylon rollers (weight bearing capacity to be 40 kg),g.i. fasteners 100 x 8 mm size for fixing frame to finished wall and necessary stainless steel screws etc. profile of frame & sash shall be mitred cut and fusion welded at all corners,including drilling of holes for fixing hardware's and drainage of water etc. after fixing frame the gap between frame and adjacent finished wall shall be filled with weather proof silicon sealant over backer rod of required size and of approved quality,all complete as per approved drawing & direction of engineer-in-charge. two track two panels sliding window of 5 mm thick toughen glass and series 2000 frame 65 x 58 mm & sash 45 x 90 mm both having wall thickness of 1.9+ 0.2 mm and single glazing bead of appropriate dimension.	Sqm	Separate Specification Sheet Attached
32	Providing and fixing factory made upvc fenesta wooden colour fixed/ louvered window and ventilation with Mosquito net and Approved sample by Architect/ Client/ EIC. all height dimension comprising of upvc multi chambered frame with in built roller track and sash extruded profiles duly reinforced with 1.60 + 0.2 mm thick galvanizd mild steel section made from roll forming process of required lenght (shape & size according to upvc profile), appropriate dimension of upvc extruded glazing beads and upvc extruded interlocks, epdm gasket, wool pile, GI fasteners 100 x 8 mm size for fixing frame to finished wall and necessary stainless steel screws etc. profile of frame & sash shall be mitred cut and fusion welded at all corners, including drilling of holes for fixing hardware's and drainage of water etc. after fixing frame the gap between frame and adjacent finished wall shall be filled with weather proof silicon sealant over backer rod of required size and of approved quality, all complete as per approved drawing & direction of engineer-in-charge. with 5 mm thick toughen glass and series 2000 frame 65 x 58 mm & sash 45 x 90 mm both having wall thickness of 1.9+ 0.2 mm and single glazing bead of appropriate dimension.	Sqm	Separate Specification Sheet Attached
33	Providing and fixing 600mm x 450mm bevelled edge mirror of superior glass mounted on 6mm thick A.C. sheet or plywood sheet and fixing to wooden pluge with C.P. brass screws and washers.	Each	Separate Specification Sheet Attached
34	Providing 10mm thick cement plaster in single coat on ceiling for interior plastering upto floor two level and finished even and smooth in (i)Cement mortar 1:3 (1-cement:3-sand)	Sqm	Separate Specification Sheet Attached
35	Providing 15mm thick cement plaster in single coat on brick/ concrete walls for interior plastering upto floor two level and finished even and smooth in (i) Cement mortar 1:4 (1-cement:4-sand)	Sqm	Separate Specification Sheet Attached
36	Providing 20 mm thick double coat mala cement plaster on interior/ exterior brick / concrete work for plastering comprising of base coat of 12 mm thick cement plaster in cement mortar (1 Cement : 4 coarse sand) in rough finishing and 8 mm thick top coat of cement mortar 1:2 (1 Cement : 2 Coarse sand) finished with trowel including scaffolding curing etc. complete.	Sqm	Separate Specification Sheet Attached
37	Providing and fixing G.I. hexagonal chickenmesh of size 16 x24 of 22 gauge at junction of concrete and brick work or between different materials after making "V" groove between two different material surface and filled with rich cement mortar and @ 100mm on each side of surfaces including necessary "U" nails / screws / washers with cleats for fixing, overlaps, scaffolding at all floors / all levels / all heights / all shapes etc. complete as per drawing / specifications and direction of Engineer-in-charge. For civil, plumbing, electrical & infrastructure works.	Sqm	Separate Specification Sheet Attached

NAME OF WORK :- Upgradation & Construction of multi outdoor sports facilities at Gandhidham District Sport Complex, Kutch.			
Separate Specification Sheet			
Sr. No.	Item of Work	Unit	Specification as per General Specification book aprooved by R&B Department for Building uploaded here with/Separate Sheet Attached
38	Providing and laying water proofing treatment in sunken portion of WCs, bathroom, terrace etc., by applying cement slurry mixed with water proofing cement compound consisting of applying : (a) First layer of slurry of cement @ 0.488 kg/sqm mixed with water proofing cement compound @ 0.253 kg/ sqm. This layer will be allowed to air cure for 4 hours. (b) Second layer of slurry of cement @ 0.242 kg/sqm mixed with water proofing cement compound @ 0.126 kg/sqm. This layer will be allowed to air cure for 4 hours followed with water curing for 48 hours. The rate includes preparation of surface, treatment and sealing of all joints, corners, junctions of pipes and masonry with polymer mixed slurry.	Sqm	Separate Specification Sheet Attached
39	Providing and laying Integral cement based brickbat coba water proofing treatment average 115mm thick and minimum thickness at khurra as 65 mm including preparation of surface as required for treatment on terraces etc. consisting of following operations and furnishing a guarantee bond of 10 years. Cleaning and applying a cement slurry at the rate 2.75 Kg per sqm mixed with water proofing compound as manufacture's specification over the slab including adjoining walls upto 300 mmheight. Laying brick bats with mortar using broken bricks/brick bats 25 mm to 115mm size with 50% of cement mortar 1:5 (1 cement : 5 coarse sand) admixed with water proofing compound conforming to IS : 2645 and approved by Engineer-in-charge over 20 mm thick layer of cement mortar of mix 1:5 admixed with water proofing compound to required slope and treating similarly the adjoining walls upto 300 mm height including rounding of junctions of walls and slabs. After three days of proper curing applying a second coat of cement slurry at the rate 2.75 Kg per sqm admixed with water proofing compound conforming to IS : 2645 and approved by Engineer-in-charge. Finishing the surface to make wired finish with average 12 mm thick jointless cement mortar of mix 1:4 (1 cement :4 coarse sand) admixed with water proofing compound. The whole terrace so finished shall be flooded with water for a minimum period of two weeks for curing and for final test. (Only plan area shall be measured, vata shall not be measured separately and paid for)	Sqm	Separate Specification Sheet Attached
40	Providing and laying broken china mosaic flooring for terrace using 12 mm to 20 mm broken pieces of glazed tiles to be laid over cement mortar 1:3 to plain or slope and to be tempered to bring mortar creme out upto surface using white cement including rounding off junctions and extending them upto 15 cm along the wall,clearing with water and oxalic acid etc. as directed.	Sqm	Separate Specification Sheet Attached
41	P & L 24" x 24" vitrified 8 mm thick tile flooring over 20 mm (average) base of cement mortar 1:6 (1 cement: 6 coarse sand) on new surface or fixing on existing flooring by adhesive material including dismantling of existing flooring and jointed with color cement slurry including finised with flush pointing & cleaning the surface etc. complete for antikid	Sqm	Separate Specification Sheet Attached
42	Providing and laying Vitrified tiles 8 to 10 mm thick , in skirting risers of steps and dedo on 10mm thick cement plaster 1:3 (1-cement : 3-coarse sand) and jointed with white cement slurry	Sqm	Separate Specification Sheet Attached
43	Providing and laying polished Kota stone slab flooring over 20mm (Average) thick base of cement mortar 1:6 (1-cement : 6-coarse sand) or L.M. 1:1.5 (1-Lime putty :1.5 - coarse sand) laid over and jointed with grey cement slurry mixed with pigment to match the shade of slab including rubbing and polishing etc. complete. (A) 25mm thick	Sqm	Separate Specification Sheet Attached
44	Providing and laying polished kota stone slab 25mm thick in risers of steps,skirting Dedo and pillars laid on 10mm 3thick cement mortar 1:3 (1-Cement : 3 coarse sand) and jointed with gray cement slury mixed with pigment to match the shade of slab including rubbing and polishing etc. complete.	Sqm	Separate Specification Sheet Attached
45	Providing and laying 16 to18 mm thick polished Granite stone slab machine cut in single piece in risers of steps, dedo, pillar, sill and jamb s or dedo laid on 10 mm thick cement mortar 1 : 3 (1 cement : 3 coarse sand) laid over and jointed withgrey cement slurry incl. rubbing and polishing etc complete. The rate includes loddng, unloading, scaffolding, wastage, making hole, cutting/ chasing, rounding champhering, edge polishing of edges. The work shall be carried out as per the approval of architect and engineer-in-charge. for all floors	Sqm	Separate Specification Sheet Attached
46	Basin Counter/Granite Platform : Providing and constructing approved shade and sample of Mirror finish granite platform , 750mm width 25 mm thick Machine polished kotah stone as vertical supports at sides,including cutting granite & kotah as per required shape , dedo 1'6" ht & size to fit kitchen sink, moulding, tiles adhesive nosing, chamfered front edges, fixing, disposal of debris etc complete with all labour and materials and as per detailed drawings / architects instruction and approval by Engineer-in-charge. The sample mock shall be approved from EIC.	Sqm	Separate Specification Sheet Attached
47	Urinal partition : Providing & laying 16 to 18 mm thick both side mirror polished granite of approved shade and quality, seleted and sorted for uniform color for urinal partition/ division plate as per design and in required sizes and shapes after chasing /cutting of dado with cutter machine fixing shall be carried out in white cement sand mortar (1:1) with matching pigment and/ or necessary adhesive. (Only finished granite work shall be measured). All expose edges shall be champhered and polished. The rate includes making hole, cutting/ chasing, rounding champhering, edge polishing of edges. The work shall be carried out as per the approval of architect and engineer-in-charge.	Sqm	Separate Specification Sheet Attached
48	Concrete flooring (IPS Flooring) : Concrete flooring : Providing and laying cement concrete flooring 1:2:4 (1-cement : 2-coarse sand : 4-graded stone aggregate 20mm nominal size) laid in one layer and finished with a floating coat of neat cement. (B) 50mm thick.	Sqm	Separate Specification Sheet Attached
49	Providing, fabricating, assembling, hoisting/ erecting and fixing in position at all heights/ all levels/ all floors/ all shapes & sizes with all leads & lifts using MS Rolled Steel Sections, Hollow sections, MS Plates/ sheet, Chequered Plates, Perforated Sheet, Flats, Bright Bars, Anchor bar, deep threaded MS bolts, threaded J bolts, insert plate, support plate etc as per drawing and all confirming to latest relevant IS codes for steel structures like staircases, railings, handrail, jali, gates, grills, bracings, platforms, brackets, monkey ladder, cattle trap, rungs, roof canopy, or similar etc. including straightening, cutting, bending, bolting and welding the members, scaffolding/ staging, profile cutting, smooth grinding, machine drilling of holes for joining/ anchoring etc complete. Standard measurements will be paid for as actual cut length used at site. The rate shall include dry sanding, degreasing (wet cleaning) & preparation of rustfree surface manually or mechanically, metal putty to make the surface even and smooth, 2 coat epoxy/ zinc rich primer and 2 coat of PU paint of approved make, shade and finish over all the surfaces of the steel sections.	Kg	Separate Specification Sheet Attached

NAME OF WORK :- Upgradation & Construction of multi outdoor sports facilities at Gandhidham District Sport Complex, Kutch.			
Separate Specification Sheet			
Sr. No.	Item of Work	Unit	Specification as per General Specification book aprooved by R&B Department for Building uploaded here with/Separate Sheet Attached
50	SS RAILING : Providing and fixing stainless steel (Grade 304) railing Horizontal top pipe of 50mm dia., verticle Sq pipe 32X32 mm 900 mm c/c and 16 mm Dia. 3 Nos. Horizontal Pipe equval Spacing Hollow Pipes, channels, plates etc., including welding, grinding, buffing, polishing and making curvature (wherever required) and fitting the same with necessary stainless steel nuts, Plates and bolts complete, i/c fixing the railing with necessary accessories & stainless steel dash fasteners, stainless steel bolts etc., of required size, on the top of the floor or the side of waist slab with suitable arrangement as per approval of Engineer-in charge, (for payment purpose only weight of stainless steel members shall be considered including fixing accessories such as nuts, bolts, fasteners etc.). as per Drawing and Approve by Engineer In Charge	Rmt	Separate Specification Sheet Attached
51	SS RAILING : Providing & Fixing Stainless steel 304 grade pipe railing Horizontal 50 mm dia. 2 Nos. and Supprt pipe from wall 16mm Dia. at everymax 0.90mtr C/C including welding, grinding, buffing, polishing and making curvature (wherever required) and fitting the same with necessary stainless steel nuts, Plates and bolts complete, i/c fixing the railing with necessary accessories & stainless steel dash fasteners, stainless steel bolts etc., fixed on Concrete or brick work . Rate including of all materials.labour, fixing & polishing etc. comp. as per Drawing and Approve by Engineer In Charge	Rmt	Separate Specification Sheet Attached
52	Wall painting (two- three coats) with plastic emulsion paint of approved brand and manufacture on undecorated wall and ceiling surface to give an even shade including throughly brushing the surface free from mortar droppings and other foreign matter and sand papered smooth.	Sqm	Separate Specification Sheet Attached
53	Finishing wall with weather proof exterior emulsion paint on wall surface (two coats) to give an required shape even shade after thoroughly brushing the surface to remove all dirt, and remains of loose powdered materials. etc complete	Sqm	Separate Specification Sheet Attached
54	Providing and applying external finish of average 2 to 2.5mm thick acrylic polymer based texture and pattern with standard tool and applicator as specified by manufacturer on exterior surfaces at all heights including scaffolding to give even shades including thoroughly brushing the surfaces free from mortar dropping and other foreign matter and sand paper smoothed etc. complete as per the manufacture specifications and up to the satisfaction of Engineer in-charge/ Architect. The rate includes making of grooves, pattas and finishing as directed by Architect/ EIC. Paint shall be measured and paid in seperate tender item. (Item should be executed by approved applicator only.)	Sqm	Separate Specification Sheet Attached
55	Fancing : Providing and fixing 'Y' shaped barbed wire fencing on compound wall top with vertical angle of 50x50x6mmx0.50 mt. height, two cross angle 50x50x6mmx0.45mt. Length, having 3 horizontal and two diagonal rows of barbed wire (9.38 kg/100 rmt) on vertical angle and three horizontal and two diagonal barbed wire rows on each cross angle incl. cost of barbed wire, necessary GI stappings, fixing on top of compound wall, painting angle with one coat of anticorrosive primer and two coats of enamel paint of approved qaulity, necessary scaffolding etc. complete as per the direction of the Engineer in charge.	Rmt	Separate Specification Sheet Attached
56	PLUMBING FIXTURE : Providing, fixing, jointing and testing in position of various Bathroom C.P. Fixtures with hydraulic testing complete as per design, drawing and instruction of site incharge. 25mm Dia Control Valve	No	Separate Specification Sheet Attached
57	Providing and fixing screw down bib taps of following size. (B) Brass chromium plated screws down Bib Tap. (i) 15mm dia.	No	Separate Specification Sheet Attached
58	Providing and fixing health faucet with 1 m PVC tube and swivel hook including all fittings complete.	No	Separate Specification Sheet Attached
59	Providing, fixing, jointing and testing in position of various Bathroom C.P. Fixtures (Angle Cock) with hydraulic testing complete as per design, drawing and instruction of site incharge. Urinal stop cock.	No	Separate Specification Sheet Attached
60	Providing and fixing white glazed vitreous china wall mounting type (European type) water closet with C.P. bolts, nuts, C.I. Chair or other hanging arrangement, white solid plastic seat with lid, C.P. brass hinges and rubber buffers, Metropole flush valve regular 40mm size (concealed body) with exposed shut off provision , C.P. brass screws and washers complete, including cutting and making good the walls floors where required. Wall hung EWC matching white plastic seat with lid & CP brass hinges & CP push plate .	No	Separate Specification Sheet Attached
61	Providing and fixing White glazed vitreous Wash Basin Round Over-Counter, size 450 mm dia., with supporting in stone flooring, 1 no, 32 mm CP Bottle trap with extension piece to wall flange with rubber adopter for waste connection,1.2m Flexible Pipe [1No] and waste coupling. Etc complete. Wash Basin Table Top - 420x420x155 mm	No	Separate Specification Sheet Attached
62	Providing & fixing in position 15 mm C.P. brass angle cock of best quality with 1.2 Rmt Long pvc Tube and accessories with necessary fittings etc. complete.	No	Separate Specification Sheet Attached
63	Providing & fixing in position 15 mm C.P. brass pillar cock of best quality with necessary fittings etc. complete.	No	Separate Specification Sheet Attached
64	Providing and fixing towel rail of approved make including, providing and fixing C.P. brass screws, making holes in walls and making good etc. complete as per suggestion of Architect/EIC.	No	Separate Specification Sheet Attached
65	Providing and fixing Towel Ring Round with Round Flange , as approved by the architect. Work complete including all type of fittings, etc complete as per suggestion of Architect/EIC.	No	Separate Specification Sheet Attached
66	Providing & fixing stainless steel recessed type soap dish of approved make. Including providing & fixing screws, washers, cutting & making good the walls etc.complete as per suggestion of Architect/EIC.	No	Separate Specification Sheet Attached
67	Supply, Installation, Testing & Commissioning vitreous matrix set (For Handicap) including matrix EWC (European type water closet) with cistern, wall hung matrix wash basin, lever arm faucet for ease of operation, centre pre-punched tap hole, grab bar with slightly lower height for added convenience & fixed to wall with brackets including cutting and making good the wall and floors as required. Colour Star White.	No	Separate Specification Sheet Attached
68	Providing and fixing Urinal of approved quality including connection with trap and with integral longitudinal flush pipe.(A) Squating plate pattern white earthenware 550mm x 300mm.	Each	Separate Specification Sheet Attached
69	Providing and fixing Kitchen sink with C.I. Or M.S. brackets, painted white including cutting holes in walls and making good the same but excluding fittings. (C) Vitreous China Sink.(i) 600mm x 450mm x 150mm size	Each	Separate Specification Sheet Attached
70	SHOWER Providing and fixing C.P. brass shower rose with 15mm or 20mm inlet.(A) 100mm dia. Each	Nos.	Separate Specification Sheet Attached

NAME OF WORK :- Upgradation & Construction of multi outdoor sports facilities at Gandhidham District Sport Complex, Kutch.			
Separate Specification Sheet			
Sr. No.	Item of Work	Unit	Specification as per General Specification book aprooved by R&B Department for Building uploaded here with/Separate Sheet Attached
71	Constructing brick masonry chamber with bricks having crushing strength not less than 35Kg/Cm2 in C.M. 1:5 C.I. cover with frame (Light duty) 750mm x 750mm intenal dimensions total weight of cover with frame to be not less than 38Kg. (Wt. of cover 23 Kg.) and Wt. of frame 15Kg.) (R.C.C. top slabe with 1:2:4 mix (1-cement :2- coarse sand :4-graded stone aggregate 20mm size) foundation concrete 1:5:10 inside plaster 15mm thick with cement mortar 1:3 finished smooth with a floating coat of neat cement on walls and bed concrete etc. complete.(i) 750mmx 750mm and 750mm deep.	Each	Separate Specification Sheet Attached
72	Constructing brick masonry chamber with bricks having crushing strength not less than 35Kg/Cm2 in C.M. 1:5 C.I. cover with frame (Light duty) 1000mm x 1000mm intenal dimensions total weight of cover with frame to be not less than 38Kg. (Wt. of cover 23 Kg.) and Wt. of frame 15Kg.) (R.C.C. top slabe with 1:2:4 mix (1-cement :2- coarse sand :4-graded stone aggregate 20mm size) foundation concrete 1:5:10 inside plaster 15mm thick with cement mortar 1:3 finished smooth with a floating coat of neat cement on walls and bed concrete etc. complete.(i) 1000mmx 1000mm and 1000mm deep.	Each	Separate Specification Sheet Attached
73	Constructing brick masonry chamber with bricks having crushing strength not less than 35Kg/Cm2 in C.M. 1:5 C.I. cover with frame (Light duty) 1200mm x 1200mm intenal dimensions total weight of cover with frame to be not less than 38Kg. (Wt. of cover 23 Kg.) and Wt. of frame 15Kg.) (R.C.C. top slabe with 1:2:4 mix (1-cement :2- coarse sand :4-graded stone aggregate 20mm size) foundation concrete 1:5:10 inside plaster 15mm thick with cement mortar 1:3 finished smooth with a floating coat of neat cement on walls and bed concrete etc. complete.(i) 1200mmx 1200mm and 1200mm deep.	Each	Separate Specification Sheet Attached
74	4 DOOR PERSONAL LOCKER UNIT - 400 W x 500D x 1830H : The lockers are made up of CRCA having 4 compartments in every tower. The size of the tower is 400 (W) X 500 (D) X 1830 (H). The tower is equally divided into 4 comparmets. Each compartment has an indivial locking mechanism pre-fitted to it. The top of the Tower is made up of 2mm thick CRCA duly powder coated to aproved finish. The caracass and shelf are made up of 0.8mm CRCA Duly Powder Coated. The skirting is made up of 1.2mm CRCA duly powder coated to the approved finish. The powder coating is of 50-60 microns. All CRCA material confirm to IS 513 CR2 2008.Rate shall inclusive of shop drawing ,mock up sample, all materials, loading, unloading, all taxes, transportation, placing at all floors and for all leads,all accessories as described in item description. As approval of architect	No	Separate Specification Sheet Attached
75	Table : Providing & fixing office table / staff table having ht of 750 mm Top, with 19mm thk plywood as per Architect/ Engineer Design or Selection and Back and side Ply of table is also made up of 19mm Thick. Top of Table is 19mm thk ply with laminate Finish Per Requirement and All internal & external Joints finished with teakwood beading Patti. Item includes fixing of drawers and keyboard tray and storage with shutters under table as per drawing. With grooves shown as per drawing. All exposed and internal surfaces covered with Laminate Finish of approved shade & Complete as per detail drawings & as instructed by Architect/consultant/ Engineer In charge. Complete with all necessary hardware like nails, ss screws, table chain, TDS channel, adhesives etc. Contractor has to provide all necessary cut outs for Electrical works & no extra payment shall be made for it. All ply should follow IS 710	Sqm	Separate Specification Sheet Attached
76	Chair Type - 01 (Main Chair) :- Supplying and providing High Back Mesh office Chair As per specification below: -Metal frame seat made of Mesh fabric upholstery (foam base) -Adjustable Head rest -Fixed Arm rest -Knee tilt mechanism -360 swivel motion/ 100mm stroke gas -Nylon Star base -Pushback mechanism & Comfy seating. -Complete as per architectural design and concept and approved by Architect & Client.	No	Separate Specification Sheet Attached
77	Chair Type - 02 (Visitor Chair) :Supplying and providing Mid Back Mesh office Chair As per specification below: -Metal frame seat made of Mesh fabric upholstery (foam base) -Center tilt mechanism -100mm class 4 gas lift -PP Fixed Arm rest -Nylon Star base/Twin wheel nylons casters -Complete as per architectural design and concept and approved by Architect & Client.	No	Separate Specification Sheet Attached
78	Single Bed : Providing and Placing Single Bed – 2050mm L X 973mm W X 720mm H1 * 412 H2 mm with headboard with combination of Tubular Steel, Particle Board and slatted mattress base with headboard. Material: Headboard panels are made of 18 mm thick Pre laminated Particle board. All the exposed edges should be edge banded with 2 mm thick PVC edge banding. Bed Leg Frame Structure consists of metal frames made of M.S. 50 x 25 mm box section in 1.2 thicknesses. Internal pipes are made of 19 x 19 mm box section in 0.9 mm thickness. Headboard pipes are made of 25 x 25 mm box section in 0.9 mm thickness. Mattress holding bkt is made of 0.6 mm CRCA SHEET Hardware: The High quality hardware should are used. Construction: Knock down construction Finish: 18 mm thick pre laminated particle board, Bed leg frame structure is powder coated in shade To thickness of 50 microns (+/- 10) Rest all metals are powder coated in shade to thickness of 50 microns (+/-10) The rate shall include all materials, hardware and labour etc. complete.	No	Separate Specification Sheet Attached
79	Providing and Placing Single Bed Mattress, pillow, bedsheet with pillow cover ,with 12mm thick prelam mdf back- 900x1950x100mm - goldline plus pu form 40 density 300 gsm cottan satin quilt cover.Mattress back putti made of 12mm thick prelam mdf bothside white finish.Kurlon dew pillow 600x400 Fill: Polyester Fibre Quality of shell fabric: 110 GSM cotton satin patti Outer Shell Layer: Cotton Fill Weight (in gms): 650.Bedsheet with pillow 100% cotton of bombay dyeing or eq.	Set	Separate Specification Sheet Attached
80	Providing and fixing cupboard of size 916W*530D*1980H mm with 4 shelves. Material – 0.7mm thick (+/-0.07mm) CRCA for shelf; 0.8mm thick (+/-0.08mm) high yield strength CRCA for doors & back; 0.9mm thick (+/-0.08mm) CRCA for all other components. It should have 2 way locking mechanism with shooting bolt & Brase handle. It should have height wise adjustable shelf With uniformly distributed load capacity per each full shelf 40kg maximum. Finish – Epoxy Powder Coated to the thickness of 50 microns (+/-10).	Nos	Separate Specification Sheet Attached

NAME OF WORK :- Upgradation & Construction of multi outdoor sports facilities at Gandhidham District Sport Complex, Kutch.			
Separate Specification Sheet			
Sr. No.	Item of Work	Unit	Specification as per General Specification book aprooved by R&B Department for Building uploaded here with/Separate Sheet Attached
81	SIGNAGE WORKS : Providing and fixing SS 304 grade brush finish 1.0 mm thick internal signage of any shape any size and in any language like Gujarati, Hindi and English with letter, numbers, graphic, arrow, symbol etc made by etching with duco paint/ laser print or vinyle sticker with lamination of approved shade. All signage plates shall be made in CNC water jet cutting, with all smoothen edges and pencil round corner. Signage matter shall be as per drawing. The plate shall be fixed on brick masonry or RCC wall/ door with the necessary fixing like stud, fastner, self adhesive or adhesive etc complete for all floor all height as directed by Architect and Engineer in charge. The rate shall be inclusive of all material, labour, drilling, fasteners/ adhesive, scaffolding etc. at all heights. Only elevation area shall be measured and paid. The contractor shall submit the shop drawings based on concept design and prepare the sample and get it approval before execution.	Sqcm	Separate Specification Sheet Attached
82	SS letter sign: Providing and fixing SS 304 letter of required height made of 3/4" SS 304 channel (1mm thick) for signage in Gujarati, Hindi and English languages and the font style (letter/ number) as approved sample or as per design and drawings. It shall be made from ISI Brushed S.S. 304 using Water jet / CNC cutting machine. It shall be fixed on the wall with chemical anchor fastener at any level any height. All Edges and corners shall be smoothened. Width of the letter shall as per the proportion of the word for depth 1". Stainless Steel Patti shall be argon welded. Duco paint of approved make, shade in required coat with necessary primer and putty shall be applied on external surface of letter. It shall be paid in as per alphabet no. In Gujarati/ Hindi language one letter shall considered with its contents (i.e. Kano, Matra etc.) i.e. 'chhi' letter in Guajarati shall be considered as one letter. Height of letters may vary + 3" shall be included in quoted rate. The rate shall be inclusive of scaffolding, drilling, adhesive material etc. complete for all heights as directed by Architect and EIC. The contractor shall submit the shop drawings based on concept design and prepare the sample and get it approval before execution.	Sqm	Separate Specification Sheet Attached
83	ACP sheet signage on Existing Pole/ New Pole: Providing and fixing signage board made of 4 mm thick ACP sheet in any shape and size and of approved make, to be cut on CNC router cutting and smoothen all corners and edges. Matter shall be cut in 3M High intensity prismatic Reflective vinyl ASTM Type 4 and paste on it as per design and detail and as per manufacturer's specifications. UV stabilized lamination shall be done on it. The ACP sheet shall be fixed with clamp and angle on new or existing MS Pole as per drawing. Content of sign shall be letters (In Gujarati & English), number, arrow, graphics / maps, logo, signs etc. in any colour as per design, drawing and approved by Architect and Engineer. All side of box shall be covered with same ACP sheet, but only one side elevation area shall be measured and paid in sqmt. Cost of MS Pole and Civil works shall be paid as per relevant tender items. The rate shall also include cost of scaffolding, drilling, fabrication, finishing, adhesive material, etc at all height and all lead, angle, fixing charges, etc. The contractor shall submit the shop drawings based on concept design submitted by architect for approval, prepare the sample and get it approve by architect before mass execution.	Sqm	Separate Specification Sheet Attached
84	S.S. 304 Letters : Providing and Fixing the S.S. 304 Letters with back light of given size as per Architect's drawings and approved sample or make (Approx Height of each letter 18 to 36 inches) along with all necessary hardwares, scaffolding, Alu/MS Back support, hanging support and accessories, The rate shall be for complete item inclusive of all material, labour, wastages, necessary tools & tackles, for all floors, all heights, all levels and all places within campus. Contractor shall do all the needful and shall fulfill Architect's design intent. No additional claims will be entertained for this. (Consider Letter : SPORT AUTHORITY OF GUJARAT DISTRICT SPORT COMPLEX GANDHIDHAM)	Each	Separate Specification Sheet Attached
85	SS LOGO : Providing and Fixing Logo including the design, fabrication, supply, and installation of stainless steel (SS) backlit Logo for signage with SS plate. Letters shall be made from high-grade SS 304 with a brushed or mirror finish and sample approved as directed by the Architect and Engineer-in-charge.. logo made SS plate any shape with backlit of given size & shape as per Architect's drawings and approved sample or make (Approx Height of logo 18 to 36 inches) along with all necessary hardwares, CNC cutting, scaffolding, Alu/MS Back support, hanging support , accessories, and vinyl,painting,powder coating self glowing mateial as directed etc. The rate shall be for complete item inclusive of all material, labour, wastages, necessary tools & tackles, for all floors, all heights, all levels and all places within campus. Contractor shall do all the needful and shall fulfill Architect's design intent. No additional claims will be entertained for this.	Nos.	Separate Specification Sheet Attached
86	Signages : Providing and fixing of the following signages using make of cosign or equivalent approved make by architect.All the detailed work out as per the detailed drawing and instruction of EIC., specifications and drawings as indicated there in to all heights and elevation including necessary scaffoldings / supports /permanant fixing with cement mortor if fixed to ground etc complete in all respects.The Signage cost should be inclusive of panels,hanging system,bridges,primary & secondary fixings,vinyl,painting,powder coating self glowing mateial as directed etc.All shop drawings and coordination with other services is in scopeof contractor. Size (300 x 600mm) - FACE /WALL MOUNTED NAME PLATES/SIGNAGES/INFORMATION SIGNAGES (with back lit)	Nos.	Separate Specification Sheet Attached

NAME OF WORK :- Upgradation & Construction of multi outdoor sports facilities at Gandhidham District Sport Complex, Kutch.			
Separate Specification Sheet			
Sr. No.	Item of Work	Unit	Specification as per General Specification book aprooved by R&B Department for Building uploaded here with/Separate Sheet Attached
87	Map : Providing, fabricating, supplying, and installing an outdoor-grade, dual-sided vertical Monolith Map Signage Kiosk of overall size 2400 mm (H) X 1200 mm (W) x 200mm (D). The internal structure must be constructed using a heavy-duty, rust-proof hot-dip galvanized MS structural framework (minimum 50 x 50 x 3 mm square tubes) capable of withstanding wind loads up to 150 km/h. The external cladding must feature 3 mm thick CNC-routed Aluminum Composite Panels (ACP) or Grade 304 Stainless Steel with premium architectural powder coating.The map display area must incorporate 10mm thick clear tempered safety glass or high-impact polycarbonate panels, housing UV-resistant, high-resolution graphics 1200dpi with sub-surface reverse printing to prevent vandalism. The kiosk must feature internal waterproof illumination powered by IP67-rated LED modules (6500k cool white), integrated dusk-to-dawn sensors, automatic timers, and internal terminal circuitry.Installation must include casting a concrete foundation of M20 grade concrete (600 x 600 x 900 mm depth) below ground level, anchored with high-tensile hot-dip galvanized anchor bolts (minimum 16 mm diameter, 4 nos.), complete with excavation, backfilling, disposal of surplus soil, and patching up the surface to match the surrounding finish.	Nos.	Separate Specification Sheet Attached
88	GENERAL DEVELOPMENT WORKS : Rolling and consolidation of earth including filling in depression which occur during the process, with power roler 8 tonne to 12 tonne, watering etc complete ans as directed by Engineer in charge.	Sqm	Separate Specification Sheet Attached
89	P.C.C : Providing and laying cement concrete 1:2:4 (1-Cement : 2- Coarse sand : 4- graded stone aggregates 20 mm nominal size) and curing complete including cost of formwork in (A) Foundation and Plinth	Cum	Separate Specification Sheet Attached
90	Construction of Granular Sub Base (GSB) by providing coarse graded material of any grade, spreading in uniform layers with motor grader on prepared surface, mixing by mix in place method with rotavator at OMC, and compacting with vibratory roller to achieve the desired density, including all material, labour, machinery with all leads and lifts etc. complete as per MORTH specification and as directed by Engineer in charge.	Cum	Separate Specification Sheet Attached
91	Providing, laying, spreading and compacting graded stone aggregate to Wet Mix Macadam (WMM) specification including premixing the material with water at OMC in mechanical mix plant carriage of mixed material by tripper to site, laying in uniform layers with paver in sub base / base course on well prepared surface and compacting with vibratory roller to achieve the desired density including all material, labour, machinery with all leads and lifts etc complete as per MORTH specification and as directed by Engineer in charge.	Cum	Separate Specification Sheet Attached
92	TRIMIX Road (M200) : Providing & Laying M200 grade controlled cement concrete without fly ash trimix using P21 (water reducing concrete admixture at 100 ml per bag of cement & recon 3 s fiber at 125 gm per bag of cement including Cutting, Filling, Rolling, consolidating and Shuttering of C channel required to maintain level, slope and thickness of the concrete road leveling of placed concrete with surface vibrator and finishing with power floater & trowel light brooming the surface & including Construction joints to be formed at every 5 mt distance by grooving with mechanical saw within 48 hrs. Groove/sawed joints shall be made of 5 mm width and depth min (1/3 rd depth of the pavement) as shown in the drawing and shall be filled with ready to use PU sealant of UV gradecutting & filling of expansion joint as directed by Engineer in charge	Cum	Separate Specification Sheet Attached
93	Providing and applying Road marking with hot applied thermoplastic paints with reflectorizing glass beads on concrete/ bitumen surface providing and laying a hot applied thermoplastic compound 2.5 mm thick including reflectorizing glass beads @ 250gms per sqm area, thickness of 2.5mm is excluding of surface applied glass beds as per IRC:35-2015. The finished surface to be level, uniform and free from streaks and holes. Thermoplastic paint contains zebra patta/ bump patta lane/ center line/ edge line/ cut patta/ arrow marking/ parking symbol/ any letter/ number etc. in any colour as approved by Architect. The white color marking shall provide luminance coefficient on cement road shall be min 130 mcd/m2/lux and asphalt road shall be min 100 mcd/m2/lux during the service life during the day time. The marking shall meet the performance criteria for night time reflectivity, wet reflectivity and skid resistance as mentioned in the section 15 of IRC 35-2015. Warranty for the Retro reflectivity shall be two years.	Sqm	Separate Specification Sheet Attached
94	Cat Eye / Road Stud / RPM: Providing and fixing Raised Pavement Markers made of polycarbonate and ABS moulded body and reflective panels with Micro prismatic lens (No Glass bead lens) capable of providing total internal reflection of the light entering the lens face and shall support a load of 13635 kgs. tested in accordance to ASTM D 4280 Type H and complying to Specifications of Category A of MORTH Circular No RW/NH/33023/10-97 D DO III Dt 11.06. 1997. The height, width and length shall not exceed 20 mm, 130 mm and 130 mm and with minimum reflective area of 13 Sqcm on each side and the slope to the base shall be 35 +/- 5 degree. The body of the marker shall having finger grip for easy and accurate placement and application with epoxy/ bituminous Adhesive as recommended by the manufacturer of the marker. The colour of the marker shall be as per the IRC 35-2015 and as directed by Architect and Engineer-in-charge.	No	Separate Specification Sheet Attached
95	Pre cast concrete kerb, - 300 x 150mm Providing and fixing pre-cast concrete kerb stone of gray cement based concrete block 30cm length,30cm height and 15cm thick of M250 grade concret as per approved design and including excavation for fixing in proper line and level,filling the joint with C:M 1:3 (1cement:3fine sand) etc complete.	Rmt	Separate Specification Sheet Attached
96	Paver Block - Providing and fixing pre-cast Rubber Dye / steel Dye inter locking concrete block 60mm thick with grade of concrete M300 pnumatic compressed / vibrated mechanically and as per approved design Confirming to IS 15658 : 2006 including 35 mm Sand layer for levelling and filling the joint with sand in proper line and level as per guidlines of IRC : SP 63-2018 etc. Complete.	Sqm	Separate Specification Sheet Attached
97	High strength Paver Block - For Parking area Providing and fixing pre-cast Rubber moulded inter locking concrete block 80 mm thick with grade of concrete M40 peumatic compressed by mechanically pressed and as per approved design induding 75mm sand layer for levelling and filling the joint with sand in proper ine and level etc. complete and including cost of carting of debris in out side of premises with all lead & bit as direded by engineer in charge	Sqm	Separate Specification Sheet Attached

NAME OF WORK :- Upgradation & Construction of multi outdoor sports facilities at Gandhidham District Sport Complex, Kutch.			
Separate Specification Sheet			
Sr. No.	Item of Work	Unit	Specification as per General Specification book aprooved by R&B Department for Building uploaded here with/Separate Sheet Attached
98	Providing and fixing in position Duel (2 No) of Dustbin for wet and dry garbage, of suggested size, material (corrosion resistance), finish (PU painted/ polyester powder coated), with logo of client and type/ function of dustbin and as per sample approved by Architect. The rate shall be for duel dustbin or two sepearate dustbin (min 40 Lit each capacity) as per selection. Rate shall be inclusive of fixing of dustbin with all required civil work, anchor fastners of approved make and required capacity and making good.	Set of duel (2 No) dustbin	Separate Specification Sheet Attached
99	Supplying of factory made precast U shape storm water drain of size 450mm x 450mm x 2000mm long,T-25 load carrying capacity – 10T Axle Load - 5T Wheel Load Wheel Load confirming to JIS having high performance self-compacting concrete of M40 Cylinder Strength /M50 Cube Strength & Fe500D shall be use for reinforcement. The product shall have tie shape joint10 - 20mm width X 25mm depth groove as per JIS on both sides of each storm water drain for jointing two precast storm water drain using cement mortar or suitable non shrink grout. The precast utility duct must consist of special in built inlets at appropriate location for fixing De-shackle for mechanical installation, including supply, transportation, installation on specific location at site in line, level, gradient and plumb with necessary testing commissioning etc complete as per instruction of engineer incharge. In no case the casting shall be allowed to be prepared at site. It should be casted in the stringent atmospheric & pre-defined condition, as per approved QAP by Engineer in charge.	Rmt	Separate Specification Sheet Attached
100	Supplying of factory made Precast Lid having length of 500mm, width suitable forplacing on U-Shape storm water drain sizes 450 x 450mm, thickness of 70mm respectively .Lid should have T-25 load carrying capacity – 10T Axle Load – 5T Wheel Load, confirming to JIS & meeting IS requirements having High Performance Self Compacting Concrete of M-40 cylinder strength /M-50 cube strength. The Fe 500/ Fe500D shall be used for reinforcement. The each lid unit should have slits of 155 mm X 20 mm slit on two sides along the width of the lid for storm water in take. Lid should have anti-skid finish at top. In no case the casting shall be allowed to be prepared at site. It should be casted in the stringent atmospheric & pre-defined condition, as per approved QAP as per Engineer in charge..	Rmt	Separate Specification Sheet Attached
101	Constructing Under Ground water tank with Providing and laying controlled cement concrete M250 mix for R.C.C. work including reinforcement, boxing, centering, vibrating, curing and mixed with approved water proofing cement compound or "CEMWET" or "PIDICRETE LW" integral water proofing admixture as water proofing agent to be mixed with 50 kgs. bags shall be as recommended by the manufacture of the water proofing material, concrete work for top, bottom slab & side pardi, column, beam for under ground water tank item incl. 300mm Free Board and Necessary excavation & refilling the available earth, raft thickness 250mm & wall thickness 230mm, 20 mm thk., Sunctipn Pit size 600mmX600mmX600mm water proofing cement plaster 20mm thick Double Coat with smooth finishing & Glazes tile Dedo, vata 10cm X 10cm , 50mm thick cement concrete flooring watering etc. Comp. to all face of tank. including locking arrangement outlet, inlet, overflow and washout outlet pipe arrangement as necessary & C.I. Cover 0.60 x 0.45 weight not less then 35 kg with locking arrngement.C.I. steps etc. comp as per structural detail drawing Including thermo Mechanically treated bars (TMT BARS) Fe 500/500D as directed by Eng-in-charge.	Litre	Separate Specification Sheet Attached
102	HORTICULTURE WORKS : Tree Plantation on Ground Providing & construction Tree plants required Digging of pits 0.6mt. x 0.6m 0.5mt, filling with goodearth with mixing of cow dong and pesticide planting the following plant of 4' to 6' height stack it well, maintain it for 3 month name of plants Neem Nagor, Avonla, Aritha, Garmala Neem, Nagor, Aronia Artha Garmala, Neem, nagor, Avonala, Aritha, Garmala etc. Completed as directed by EIC.	No	Separate Specification Sheet Attached
103	Hedge/ Shrub/ Ground cover plantation Supplying well grown Hedge plants/ shrub plants and ground cover plants of specified species and height proposed planting pallette in specification and planting in planter/ on land with good soil, manure, sludge, pesticide & insecticide/ anti termite, fertilizer etc. Plants shall be disease free and fungus free in polythene bag. Plastic bags or pots shall be removed carefully and soil around the roots shall not be dropped or disturbed much. Shrub shall be plant @ average c/c depend on type of species as per pallette. Work shall be done as shown in the drawing or as directed and approved by architect and EIC. The ground coverage shall be dense and uniform throughout the planting area. Rates of mortality up to maintenance period to be inclusive, in that condition contractor has to replace the plant of same specification with out any extra cost. Rate shall be for in to in area of planter or ground area in square meter. Rate shall be for cost of shrub, loading, transporting, unloading, planting, pesticides, fertilizers, anti termite treatment, watering, maintaining, replanting (if plant will be died) etc but excluding the cost of garden soil and it shall be paid in relevant tender item. Shrub plants/ Hedge plants and ground cover plants varieties shall be as per proposed planting pallette. Rate shall be inclusive of maintainace for period of 365 days from date of substantial handover.	No	Separate Specification Sheet Attached
104	Providing and laying Lawn Plantation with earth 50mm to 60mm thickness on prepared ground with proper level and ramming with tools wooden (Dhurmos) and than rolling the surface with light roller make the surface smoothen and light watering with sprinkler and maintenance more till the grass establish properly, as per direction of officer-in-charge. Rate shall be inclusive of surface preparation/ rough dressing/ fine dressing/ ploughing/ clod breaking of the ground and anti-termite Treatment (vertically and horizontally) with the use of approved pesticides (neem cake oil or similar as suggested and approved by EIC) as per specification and as per manufacturer's recommendation, fertilizers, but excluding the cost of garden soil, which shall be paid in relevant tender items. Rate shall be inclusive of establishment of lawn, gap filling between turf pecies and application of roller and maintainace for period of 365 days from date of substantial handover. All steps have to followed by contractor as specified in specification for proper establishment of lawn. From surface preparation to after lawn establishment, all steps are inclusive in this item.	Sqm	Separate Specification Sheet Attached
105	CRICKET GROUND : Rolling and Consolidating of soling including filling in depression which occurs during the process with power roller 8 tonne to 12 tonne. and compacting the bed as per specifications	Sqm	Separate Specification Sheet Attached

NAME OF WORK :- Upgradation & Construction of multi outdoor sports facilities at Gandhidham District Sport Complex, Kutch.			
Separate Specification Sheet			
Sr. No.	Item of Work	Unit	Specification as per General Specification book approved by R&B Department for Building uploaded here with/Separate Sheet Attached
106	Sandy loom soil 8" thick : first 4" layer (2" + 2") Layer of Sandy Loom Soil Compaction By Vibro Roller in Dry and Wet Form than 2" x 2 Layer of Sandy Loom Soil Compaction By vibro roller and next layers by plate vibrator first 4" layer required compaction by vibro roller in dry and wet form and next layer required in 2" only statics rolling in form of layer by plate vibrator.	Cum	Separate Specification Sheet Attached
107	Providing & laying of Grassing with selection No.1 Doob grass In rows 5 cm apart in both directions including watering and maintenance of the lawn for 3 months or more till the grass forms a thick lawn, free from weeds and fit for mowing includag supplying farm clay up 300 mm thick, sludge, manure, pesticides, extra earth, disposal of rubbish, trench excavation and all labour with lead and lift etc. complete as directed by EIC	Sqm	Separate Specification Sheet Attached
108	Providing and making Cricket Pitch having size of 22.65mt x 3.66mt. - 2 Nos. of Turf Wicket as below. 1st Layer - Supply and Laying Ballast (Stone + Sum dup up Soil) 9" Layering (as per approved sample) supply of all labour, also includes dressing leveling of trench. 2nd Layer - 9" Two layer of Brick. 3rd Layer - Supply & laying Charcol and Fine Sand 1" Laying(as per approved sample)supply fo all labour also includes dressing leveliing of trancht. 4th Layer - For making pitch supply & laying 9" dry and wet compaction equally from bottom of top level but in the form of Soil Mixture (Black/Clay Soil+red Soil+ Morrum) (as per approved sample) including supply of labour with dressing & levelling,Compaction and quantity is compacted @35 to 40 %. 5th Layer - For making pitch supply & laying 3" dry and wet compaction equally from bottom of top level but in the form of Soil Mixture (Black/Clay Soil+red Soil+ Morrum+manure) (as per approved sample) including supply of labour with dressing & levelling,Compaction and quantity is compacted @35 to 40 %. 6th Layer - For making pitch supply & laying 6" dry and wet compaction equally from bottom of top level but in the form of Rich Mixture of Soil and Natural grass (Black/Clay Soil+red Soil+ Morrum+manure) (as per approved sample) including supply of labour with dressing & levelling. scratching by panja and using plate vibrator x 4 times (as per approved sample) with water spreay, labour with proper grinding & shorting, dressing & levelling of pitch as per desired level and compaction, quality of clay soil shall be-as per BCCI Norms supply of all labour, T & P etc and also includes dressing leveling of trench.	Job	Separate Specification Sheet Attached
	1. Have high clay contants 50-70%, Silt 5-20%, Fine sand -10-20%, Medium sand -0-10%, Course sand – 1%. 2. Have good hydraulic conductivity. 3. Swell and shrink well, cracks to allow water and air to penetrate deep and regenerate. 4. Retain moisture. 5. Encourage grass recovery. 6. PH Value shall be 7-8. 7. Crushing strength -0.8-1.6 MPA. 8. Cracking pattern –breaking in to 2-5 pcs. 9. Linear shrinkage- 8-15 preferably 10 10. Dispersion – between 0 & 8 11. Sodium content-,<3% 12. Organic matter-<5%. Drain Pipe - Supply & laying Isl 110 MM PVC Pipe (underneath) around the Pitch Square with a gradient of 1:100 Feet and connected to the main outward Drainage system through PVC / 4" dai PVC perforated pipe (perforation at half of the pipe at top level), wrapped with geo-fabric cloth, covered by stone granules, sand etc and at any one direction along with the desired slope ratio. connected with boundary storm water drain line. Supply & laying ISI 150 MM PVC Pipe plain connect to main strom water line with pitch block rain water drain line.		
109	Cricket Ground - Drainage Work : Earth work in excavation by mechanical means (Hydraulic excavator)/ manual means over areas (exceeding 30cm in depth. 1.5m in width as well as 10 sqm on plan) including dressing of sides and ramming of bottom disposal of excavated earth, lead upto 50m and lift upto 1.5m, disposed earth to be levelled and neatly dressed. (No extra lift is payable if work is done by mechanical means) All kinds of soil	Cum	Separate Specification Sheet Attached
110	OUTDOOR BASKETBALL COURT : Excavation of Foundation in Soft Murrum, Soil or Sand from 0.0 mtr. to 1.50 mtr depth including lifting laying in 90 mtr. Lead area as instructed	Cum	Separate Specification Sheet Attached
111	Rolling and Consolidating of soling including filling in depression which occurs during the process with power roller 8 tonne to 12 tonne. and compacting the bed as per specifications	Sqm	Separate Specification Sheet Attached
112	Providing and laying of One Layer of WBM of 150mm thick, aggregate size 63mm well graded down to 40mm with filling up the voids with Quarry dust and water as lubricant to be rolled wet to achieve strong and stable base. Brushing the excess material until needed.	Cum	Separate Specification Sheet Attached
113	Providing, laying, spreading and consolidation graded stone aggregate to Wet mix macadam 150mm compacted thick as per MORT & H specifications including premixing the material with water at OMC in mechanical plant carriage of mixed material by tippers to site, laying in uniform layers in sub base/ base course on well prepared surface and compacting with roller to achieve the desired density.	Cum	Separate Specification Sheet Attached
114	Cleaning and brushing the Existing surface incl. removing of excess binding material and other foreign matter with wire brushes and small picks, sweeping with brooms or soft brushes to receive bitumious treatment complete in all respects as per specification	Sqm	Separate Specification Sheet Attached
115	Providing and applying primer coat with Bitumen VG-30 / Bitumen 60/70 Grade on prepared surface and spraying primer uniformly at the rate of 1.0 kg per sqm using mechanical means, complete as per MoRTH Specifications.	Kg	Separate Specification Sheet Attached
116	Providing and laying of one layer of B.M.(Bitumen Macadam) thickness of 50mm aggregate size 12mm down to 6mm well graded bitumen content 4.5 to 5% by wt adding special binder in an appropriate proportion and will be rolled and taking care of the undulations and compacting the surface while the mix is hot and in an appropriate temperature maintaining the required slope.	MT	Separate Specification Sheet Attached

NAME OF WORK :- Upgradation & Construction of multi outdoor sports facilities at Gandhidham District Sport Complex, Kutch.			
Separate Specification Sheet			
Sr. No.	Item of Work	Unit	Specification as per General Specification book aprooved by R&B Department for Building uploaded here with/Separate Sheet Attached
117	Providing and applying primer coat with Bitumen VG-30 / Bitumen 60/70 Grade on prepared surface and spraying primer uniformly at the rate of 1.0 kg per sqm using mechanical means, complete as per MoRTH Specifications.	Kg	Separate Specification Sheet Attached
118	Providing and laying of one layer of BC. aggregate size 6mm down well graded to 2mm average thickness 40mm. Bitumen content 6% by wt of the mix with stone dust and adding special binder in an appropriate proportion and will be rolled by 8 to 10 tons of roller taking care of the undulations and wheel marks.	MT	Separate Specification Sheet Attached
119	Providing and laying one layer of Seal coat	Sqm	Separate Specification Sheet Attached
120	P.C.C : Providing and laying cement concrete 1:2:4 (1-Cement : 2- Coarse sand : 4- graded stone aggregates 20 mm nominal size) and curing complete including cost of formwork in (A) Foundation and Plinth	Cum	Separate Specification Sheet Attached
121	Brick work using common burnt clay building bricks having crushing strength not less than 35 kg./Sq.Cm. in foundation and plinth in Cement Mortar 1:5. (1- Cement : 5 -fine sand)(B) Conventional	Cum	Separate Specification Sheet Attached
122	Providing 15mm thick cement plaster in single coat on brick/ concrete walls for interior plastering upto floor two level and finished even and smooth in (i) Cement mortar 1:4 (1-cement:4-sand)	Sqm	Separate Specification Sheet Attached
123	Providing and fixing (Chainlink Fencing) with fabrication of M.S. Angle vertical support of size 75x75x6 mm and horizontal support of 50x50x6 mm on top, centre and bottom with galvanize chain link 50x50 10 guage jali fitted with 40x6 mm M.S. flat including welding and erecting the same in position incement concrete (1:2:4) foundation blocks including excavation of size 600 × 600 × 900 mm, placing concrete, setting posts in line and level, and refilling around the foundation complete. Posts shall be provided at 3.00 m centre to centre spacing. with necessary excavation including two coats of oil Painting over single coat of primer etc complete as directed & inclurling one open able gate 3' ft wide and 7 ft in ht. including of two coats of oil paint on M.S. Structure as per drawing & directed by Engineer in charge	Sqm	Separate Specification Sheet Attached
124	Providing and laying Synthetic Surface- ITF Approved -8 layer full cushion Synthetic surface which consists of 1 layer of Acrylic resurfacer 5 layers of rubber cushion ,and 2 layers of color with line marking according to the international standards	Sqm	Separate Specification Sheet Attached
125	Providing and fixing 1 Pair of Basketball Pole made of MS Pipe 150mm x 150mm according to international standard. Fiber glass backboard - 20 mm thick transparent acrylic 184 x 106 Cms with International standard die made frame with Dunking Ring including of cement concrete foundation 0.900 x 0.900x 0.900 mm	Pair	Separate Specification Sheet Attached
126	OUTDOOR VOLLEYBALL COURT : Excavation of Foundation in Soft Murrum, Soil or Sand from 0.0 mtr. to 1.50 mtr depth including lifting laying in 90 mtr. Lead area as instructed	Cum	Separate Specification Sheet Attached
127	Carring out plinth treatment to post construction / existing structure by spraying chemical solution for termite control treatment including labour and material consistment with I.S.I specification. Using Chlordene and Chiorpurfiles 20 EC. As Per 6131_paret-II Consentration Weight one percent is recommended i.e one litre 20 EC chemical emulsion with 19 liter give 1 % concentration inclusive of one litre chemical emulsion appication at the rate of 5 Litre chemical / Sqm of surface is recommended as per I.S	Sqm	Separate Specification Sheet Attached
128	Rolling and Consolidating of soling including filling in depression which occurs during the process with power roller 8 tonne to 12 tonne. and compacting the bed as per specifications to core test 97% compacting complete in all respects to the entire satisfaction of the Engineer-in-charge.	Sqm	Separate Specification Sheet Attached
129	Providing, laying, spreading and consolidation 150 MM Brick Bats as per the instruction of engineer in charge including spreading to required density watering etc complete.	Cum	Separate Specification Sheet Attached
130	Filling in plinth with sand under floors including watering ramming, consolidating and dressing complete	Cum	Separate Specification Sheet Attached
131	Filling in Red soil as aproved by engineer in charge For ground top layers in including watering, ramming and consolidating and achieving required density soil must have property of not eroding ,holds water and soft. The rate includes all labour and machinary and spreading in layers and transportation complete.	Cum	Separate Specification Sheet Attached
132	P.C.C : Providing and laying cement concrete 1:2:4 (1-Cement : 2- Coarse sand : 4- graded stone aggregates 20 mm nominal size) and curing complete including cost of formwork in (A) Foundation and Plinth	Cum	Separate Specification Sheet Attached
133	Brick work using common burnt clay building bricks having crushing strength not less than 35 kg./Sq.Cm. in foundation and plinth in Cement Mortar 1:5. (1- Cement : 5 -fine sand)(B) Conventional	Cum	Separate Specification Sheet Attached
134	Providing 15mm thick cement plaster in single coat on brick/ concrete walls for interior plastering upto floor two level and finished even and smooth in (i) Cement mortar 1:4 (1-cement:4-sand)	Sqm	Separate Specification Sheet Attached
135	Providing and fixing (Chainlink Fencing) with fabrication of M.S. Angle vertical support of size 75x75x6 mm and horizontal support of 50x50x6 mm on top, centre and bottom with galvanize chain link 50x50 10 guage jali fitted with 40x6 mm M.S. flat including welding and erecting the same in position incement concrete (1:2:4) foundation blocks including excavation of size 600 × 600 × 900 mm, placing concrete, setting posts in line and level, and refilling around the foundation complete. Posts shall be provided at 3.00 m centre to centre spacing. with necessary excavation including two coats of oil Painting over single coat of primer etc complete as directed & inclurling one open able gate 3' ft wide and 7 ft in ht. including of two coats of oil paint on M.S. Structure as per drawing & directed by Engineer in charge	Sqm	Separate Specification Sheet Attached
136	Providing and fixing Net poles and net with Ground fixing sleeves	Pair	Separate Specification Sheet Attached
137	OUTDOOR TENNIS COURT : Excavation of Foundation in Soft Murrum, Soil or Sand from 0.0 mtr. to 1.50 mtr depth including lifting laying in 90 mtr. Lead area as instructed	Cum	Separate Specification Sheet Attached
138	Carring out plinth treatment to post construction / existing structure by spraying chemical solution for termite control treatment including labour and material consistment with I.S.I specification. Using Chlordene and Chiorpurfiles 20 EC. As Per 6131_paret-II Consentration Weight one percent is recommended i.e one litre 20 EC chemical emulsion with 19 liter give 1 % concentration inclusive of one litre chemical emulsion appication at the rate of 5 Litre chemical / Sqm of surface is recommended as per I.S	Sqm	Separate Specification Sheet Attached
139	Rolling and Consolidating of soling including filling in depression which occurs during the process with power roller 8 tonne to 12 tonne. and compacting the bed as per specifications	Sqm	Separate Specification Sheet Attached

NAME OF WORK :- Upgradation & Construction of multi outdoor sports facilities at Gandhidham District Sport Complex, Kutch.			
Separate Specification Sheet			
Sr. No.	Item of Work	Unit	Specification as per General Specification book aprooved by R&B Department for Building uploaded here with/Separate Sheet Attached
140	Providing and laying of One Layer of WBM of 150mm thick, aggregate size 63mm well graded down to 40mm with filling up the voids with Quarry dust and water as lubricant to be rolled wet to achieve strong and stable base. Brushing the excess material until needed.	Cum	Separate Specification Sheet Attached
141	Providing, laying, spreading and consolidation graded stone aggregate to Wet mix macadam 150mm compacted thick as per MORT & H specifications including premixing the material with water at OMC in mechanical plant carriage of mixed material by tippers to site, laying in uniform layers in sub base/ base course on well prepared surface and compacting with roller to achieve the desired density.	Cum	Separate Specification Sheet Attached
142	Cleaning and brushing the Existing surface incl. removing of excess binding material and other foreign matter with wire brushes and small picks, sweeping with brooms or soft brushes to receive bitumious treatment complete in all respects as per specification	Sqm	Separate Specification Sheet Attached
143	Providing and applying primer coat with Bitumen VG-30 / Bitumen 60/70 Grade on prepared surface and spraying primer uniformly at the rate of 1.0 kg per sqm using mechanical means, complete as per MoRTH Specifications.	Kg	Separate Specification Sheet Attached
144	Providing and laying of one layer of B.M.(Bitumen Macadam) thickness of 50mm aggregate size 12mm down to 6mm well graded bitumen content 4.5 to 5% by wt adding special binder in an appropriate proportion and will be rolled and taking care of the undulations and compacting the surface while the mix is hot and in an appropriate temperature maintaining the required slope.	MT	Separate Specification Sheet Attached
145	Providing and applying primer coat with Bitumen VG-30 / Bitumen 60/70 Grade on prepared surface and spraying primer uniformly at the rate of 1.0 kg per sqm using mechanical means, complete as per MoRTH Specifications.	Kg	Separate Specification Sheet Attached
146	Providing and laying of one layer of BC. aggregate size 6mm down well graded to 2mm average thickness 40mm. Bitumen content 6% by wt of the mix with stone dust and adding special binder in an appropriate proportion and will be rolled by 8 to 10 tons of roller taking care of the undulations and wheel marks.	MT	Separate Specification Sheet Attached
147	Providing and laying one layer of Seal coat	Sqm	Separate Specification Sheet Attached
148	P.C.C : Providing and laying cement concrete 1:2:4 (1-Cement : 2- Coarse sand : 4- graded stone aggregates 20 mm nominal size) and curing complete including cost of formwork in (A) Foundation and Plinth	Cum	Separate Specification Sheet Attached
	Brick work using common burnt clay building bricks having crushing strength not less than 35 kg./Sq.Cm. in foundation and plinth in Cement Mortar 1:5. (1- Cement : 5 -fine sand)(B) Conventional	Cum	Separate Specification Sheet Attached
149	Providing 15mm thick cement plaster in single coat on brick/ concrete walls for interior plastering upto floor two level and finished even and smooth in (i) Cement mortar 1:4 (1-cement:4-sand)	Sqm	Separate Specification Sheet Attached
150	Providing and fixing (Chainlink Fencing) with fabrication of M.S. Angle vertical support of size 75x75x6 mm and horizontal support of 50x50x6 mm on top, centre and bottom with galvanize chain link 50x50 10 guage jall fitted with 40x6 mm M.S. flat including welding and erecting the same in position incement concrete (1:2:4) foundation blocks including excavation of size 600 × 600 × 900 mm, placing concrete, setting posts in line and level, and refilling around the foundation complete. Posts shall be provided at 3.00 m centre to centre spacing. with necessary excavation including two coats of oil Painting over single coat of primer etc complete as directed & inclurling one open able gate 3' ft wide and 7 ft in ht. including of two coats of oil paint on M.S. Structure as per drawing & directed by Engineer in charge	Sqm	Separate Specification Sheet Attached
151	Providing and laying Synthetic Surface- ITF Approved -8 layer full cushion Synthetic surface which consists of 1 layer of Acrylic resurfacer 5 layers of rubber cushion, and 2 layers of color with line marking according to the international standards	Sqm	Separate Specification Sheet Attached
152	Providing and Fixing Tennis Post, Net Wire and Net - HD Canvas/Terton tape machine knitted 3mm	Pair	Separate Specification Sheet Attached
153	Providing and fixing Tennis referee chair foldable	Nos	Separate Specification Sheet Attached
154	Providing and fixing Tennis Score board Manual score board, portable and movable, all construction steel	Nos	Separate Specification Sheet Attached
155	KABBADI COURT : Excavation of Foundation in Soft Murrum, Soil or Sand from 0.0 mtr. to 1.50 mtr depth including lifting laying in 90 mtr. Lead area as instructed	Cum	Separate Specification Sheet Attached
156	Rolling and Consolidating of soling including filling in depression which occurs during the process with power roller 8 tonne to 12 tonne. and compacting the bed as per specifications to core test 97% compacting complete in all respects to the entire satisfaction of the Engineer-in -charge.	Sqm	Separate Specification Sheet Attached
157	P.C.C : Providing and laying cement concrete 1:2:4 (1-Cement : 2- Coarse sand : 4- graded stone aggregates 20 mm nominal size) and curing complete including cost of formwork in (A) Foundation and Plinth	Cum	Separate Specification Sheet Attached
158	Brick work using common burnt clay building bricks having crushing strength not less than 35 kg./Sq.Cm. in foundation and plinth in Cement Mortar 1:5. (1- Cement : 5 -fine sand)(B) Conventional	Cum	Separate Specification Sheet Attached
159	Providing 15mm thick cement plaster in single coat on brick/ concrete walls for interior plastering upto floor two level and finished even and smooth in (i) Cement mortar 1:4 (1-cement:4-sand)	Sqm	Separate Specification Sheet Attached
160	Filling in Red soil as aproved by engineer in charge For ground top layers in including watering, ramming and consolidating and achieving required density soil must have property of not eroding ,holds water and soft. The rate includes all labour and machinary and spreading in layers and transportation complete.	Cum	Separate Specification Sheet Attached
161	Providing, laying, spreading and consolidation 150 MM Brick Bats as per the instruction of engineer in charge including spreading to required density watering etc complete.	Cum	Separate Specification Sheet Attached
162	Filling in plinth with sand under floors including watering ramming, consolidating and dressing complete	Cum	Separate Specification Sheet Attached
163	Movable Goal Posts Made with branded high-quality MS Steel Pipe in 4" Dia of Branded Epoxy Paint with Rust & Corrosion Free and Zero Vibration the Size: 24 Feet x 8 Feet (7.32 mt Long and 2.44 mt Hight, Back Support of 1.5" . The Poles Comprise wheels which make it easy to move with Goal Nets High Rigidity Material 4.5 mm machine knitted the color will be as per the standards requirements	Nos	Separate Specification Sheet Attached
164	KHO - KHO COURT : Excavation of Foundation in Soft Murrum, Soil or Sand from 0.0 mtr. to 1.50 mtr depth including lifting laying in 90 mtr. Lead area as instructed	Cum	Separate Specification Sheet Attached

NAME OF WORK :- Upgradation & Construction of multi outdoor sports facilities at Gandhidham District Sport Complex, Kutch.			
Separate Specification Sheet			
Sr. No.	Item of Work	Unit	Specification as per General Specification book approved by R&B Department for Building uploaded here with/Separate Sheet Attached
165	Rolling and Consolidating of soling including filling in depression which occurs during the process with power roller 8 tonne to 12 tonne. and compacting the bed as per specifications to core test 97% compacting complete in all respects to the entire satisfaction of the Engineer-in -charge.	Sqm	Separate Specification Sheet Attached
166	P.C.C : Providing and laying cement concrete 1:2:4 (1-Cement : 2- Coarse sand : 4- graded stone aggregates 20 mm nominal size) and curing complete including cost of formwork in (A) Foundation and Plinth	Cum	Separate Specification Sheet Attached
167	Brick work using common burnt clay building bricks having crushing strength not less than 35 kg./Sq.Cm. in foundation and plinth in Cement Mortar 1:5. (1- Cement : 5 -fine sand)(B) Conventional	Cum	Separate Specification Sheet Attached
168	Providing 15mm thick cement plaster in single coat on brick/ concrete walls for interior plastering upto floor two level and finished even and smooth in (i) Cement mortar 1:4 (1-cement:4-sand)	Sqm	Separate Specification Sheet Attached
169	Filling in Red soil as aproved by engineer in charge For ground top layers in including watering, ramming and consolidating and achieving required density soil must have property of not eroding ,holds water and soft. The rate includes all labour and machinary and spreading in layers and transportation complete.	Cum	Separate Specification Sheet Attached
170	Providing, laying, spreading and consolidation 150 MM Brick Bats as per the instruction of engineer in charge including spreading to required density watering etc complete.	Cum	Separate Specification Sheet Attached
171	Filling in plinth with sand under floors including watering ramming, consolidating and dressing complete	Cum	Separate Specification Sheet Attached
172	Providing and fixing KHO KHO POST (HEAVY WOODEN) Or Fiber For Kho-Kho including all required materials labours as approved by Engineer Incharge.will be as per the standards requirements	No	Separate Specification Sheet Attached
173	ATHLETIC SYNTHETIC TRACK : Rolling and Consolidating of soling including filling in depression which occurs during the process with power roller 8 tonne to 12 tonne. and compacting the bed as per specifications to core test 97% compacting complete in all respects to the entire satisfaction of the Engineer-in -charge.	Sqm	Separate Specification Sheet Attached
174	Providing and laying of One Layer of WBM of 150mm thick, aggregate size 63mm well graded down to 40mm with filling up the voids with Quarry dust and water as lubricant to be rolled wet to achieve strong and stable base. Brushing the excess material until needed.	Cum	Separate Specification Sheet Attached
175	Providing, laying, spreading and consolidation graded stone aggregate to Wet mix macadam 150mm compacted thick as per MORT & H specifications including premixing the material with water at OMC in mechanical plant carriage of mixed material by tippers to site, laying in uniform layers in sub base/ base course on well prepared surface and compacting with roller to achieve the desired density.	Cum	Separate Specification Sheet Attached
176	Providing and applying primer coat with bitumen VG 30 60/70 Grade on prepared surface of granular base including clearing of road surface and spraying primer at the rate of 1kg/1sqm using mechanical means.	Sqm	Separate Specification Sheet Attached
177	Providing and laying of one layer of B.M.(Bitumen Macadam) thickness of 50mm aggregate size 12mm down to 6mm well graded bitumen content 4.5 to 5% by wt adding special binder in an appropriate proportion and will be rolled and taking care of the undulations and compacting the surface while the mix is hot and in an appropriate temperature maintaining the required slope.	MT	Separate Specification Sheet Attached
178	Providing and applying primer coat with bitumen VG 30 60/70 Grade on prepared surface of granular base including clearing of road surface and spraying primer at the rate of 1kg/1sqm using mechanical means.	Kg	Separate Specification Sheet Attached
179	Providing and laying of one layer of BC. aggregate size 6mm down well graded to 2mm average thickness 40mm. Bitumen content 6% by wt of the mix with stone dust and adding special binder in an appropriate proportion and will be rolled by 8 to 10 tons of roller taking care of the undulations and wheel marks.	MT	Separate Specification Sheet Attached
180	TRIMIX Road (M200) : Providing & Laying M200 grade controlled cement concrete without fly ash trimix using P21 (water reducing concrete admixture at 100 ml per bag of cement & recon 3 s fiber at 125 gm per bag of cement including Cutting, Filling, Rolling, consolidating and Shuttering of C channel required to maintain level, slope and thickness of the concrete road leveling of placed concrete with surface vibrator and finishing with power floater & trowel light brooming the surface & including Construction joints to be formed at every 5 mt distance by grooving with mechanical saw within 48 hrs. Groove/sawed joints shall be made of 5 mm width and depth min (1/3 rd depth of the pavement) as shown in the drawing and shall be filled with ready to use PU sealant of UV gradecutting & filling of expansion joint as directed by Engineer in charge	Cum	Separate Specification Sheet Attached
181	Providing and Laying 14 mm thick full synthetic running track of IAAF certified product - Class-II with SBR 10/11 mm (Minimum 7 kg SBR /smt) bonded together with Binder (Minimum 18% Binder to be mixed with 7kg SBR /smt) with PU sealer (Minimum 1.3 kg/smt) , PU Top/Wear Layer (Minimum 2 kg/smt) binding with EPDM 1 - 4 mm (3.5 kg/smt). including lane seperator laid down by IAAF and contractor has to procure IAAF certification class-II for the same as direction of the engineer-in-charge	Sqm	Separate Specification Sheet Attached
182	Providing and Laying Geo- Textile Fabric Membrane 150 GSM as directed by Engineer in charge etc. complete	Sqm	Separate Specification Sheet Attached
183	Filling in plinth with sand under floors including watering ramming, consolidating and dressing complete.	Cum	Separate Specification Sheet Attached
184	Supply, Transportation and spreading of filter media (Gravel) in necessary layer with required labour etc. complete	Cum	Separate Specification Sheet Attached
185	Root zone material and additives Supplying and mix COCOPEAT@ 10.00 kg / M3 of sand.	Kg	Separate Specification Sheet Attached
186	Supply and mix organic matter content with microbial enrichment and carbon to Nitrogen ratio of 20:1,@ 10kg/m3 of sand as per technical specification attached and direction of Engineer in charge.	Kg	Separate Specification Sheet Attached
187	Supply and spread the homogenous mixture of medium fines and, USGA Standards and organic matter as above to aminimum 225 mm depth over the whole of the field and margin are a including required Grading and grass bed preparation Grade the field of play with equipments fitted with ripping tines and laser receivers for dual grade laser grading to +/-5mm tolerance	Cum	Separate Specification Sheet Attached
188	Grassing with Hybrid Bermuda cultivar Supplying and spring Hybrid Bermuda cultivar grass calibrated to apply the exact rate required.	Sqm	Separate Specification Sheet Attached
189	Anti termite treatment of lawn area through premise 30.50% I P. one liter premise diluted in 499 liters water and applying solution @ 1.00 litre solution per sqm lawn or bed area.(two application) i/c cost of chemical)and as per direction of officer-in-charge.	Sqm	Separate Specification Sheet Attached

NAME OF WORK :- Upgradation & Construction of multi outdoor sports facilities at Gandhidham District Sport Complex, Kutch.			
Separate Specification Sheet			
Sr. No.	Item of Work	Unit	Specification as per General Specification book aprooved by R&B Department for Building uploaded here with/Separate Sheet Attached
190	Providing and fixing of IAAF approved instrument as follows: Discus/Hammer Throwing Circle/Ring without Throwing safety cages with required poles net incl. the ground fixing sleeves and ground hooks etc. for Discus and Hammer Throw. The product should be IAAF approved as per IAAF's latest certified competition equipment list.	Nos	Separate Specification Sheet Attached
191	Providing and fixing of IAAF approved instrument as follows: Discus/Hammer Throwing Circle/Ring with Throwing safety cages with required poles net incl. the ground fixing sleeves and ground hooks etc. for Discus and Hammer Throw. The product should be IAAF approved as per IAAF's latest certified competition equipment list.	Nos	Separate Specification Sheet Attached
192	Providing and fixing of IAAF approved instrument as follows: Shot Put Throwing Circle/Ring without Throwing safety cages with required poles net incl. the ground fixing sleeves and ground hooks etc. The product should be IAAF approved as per IAAF's latest certified competition equipment list.	Nos	Separate Specification Sheet Attached
193	Providing and fixing of IAAF approved instrument as follows: Stop board for shot put including installation as directed by E.I.C. The product should be IAAF approved as per IAAF's latest certified competition equipment list.	Nos	Separate Specification Sheet Attached
194	Providing and fixing of IAAF approved instrument as follows: Take off boards alongwith plasticine indication Boards and Blanking Boards for Long Jumps including installation as directed by E.I.C.. The product should be IAAF approved as per IAAF's latest certified competition equipment list.	Nos	Separate Specification Sheet Attached
195	Providing and fixing of IAAF approved instrument as follows: Take off boards alongwith plasticine indication board and Blanking Boards for triple jump including installation as directed by E.I.C. The product should be IAAF approved as per IAAF's latest certified competition equipment list.	Nos	Separate Specification Sheet Attached
196	Providing and fixing of IAAF approved instrument as follows: Aluminum fixing arrangement to fix hurdles for water pit/jump along with adustable hurdle for water pit. Heavy duty foldable beam made square Pipe inside & covered with thick Water proof solid plywood. Base legs & base made of steel square pipe with spring loaded snap lock system for easy adjustment of three different required heights. 762m.m. , 838m.m. , 914 m.m. Legs are fitted into sockets grouted in to the ground. Painted with premium quality Poly urethane paint for longer life & durability. Easy to install & foldable to transport. The product should be IAAF approved as per IAAF's latest certified competition equipment list.	Nos	Separate Specification Sheet Attached
197	Providing and fixing of IAAF approved instrument as follows: Aluminum fixing arrangement to fix hurdles for Steeplechase. Barrier beam made of 100 mm x 100 mm Steel Tube, covered with water proof plywood. Base legs have spring loaded snap-locks for easy height (3 heights) adjustment. The product should be IAAF approved as per IAAF's latest certified competition equipment list.	Nos	Separate Specification Sheet Attached
198	Pole Vault Box including installation as directed by E.I.C. The product should be IAAF approved as per IAAF's latest certified competition equipment list.	Nos	Separate Specification Sheet Attached
199	Providing Pole Vault Pit:This pit is made of best quality non-tear water proof thick fabric, P.U. foam. The special design of this pit allows smooth and soft landing and is made as per the new IAAF specifications. Comes with spike proof top. Cover made of vinyl coated fabric for extra durability. Consists of seven base units and one top pad with four side handles on each base for easy carrying. With Rain Cover. Size- 600cm x 800cm x 80cm	Set	Separate Specification Sheet Attached
200	Starting Block;(IAAF Certified. Centre rail made of special 75 mm slotted aluminium channel with ribs to slip in anchor plates ensuring high ground stability. Heavy aluminium paddles with thick rubber pads. Rust proof plates with spikes to hold the starting block on synthetic tracks / cinder tracks.)	Nos	Separate Specification Sheet Attached
201	Fixed Goal Post Anchored at BottomMade with branded high-quality MS Steel Pipe in 4" Dia of Branded Epoxy Paint with Rust & Corrosion Free and Zero Vibration the Size: 24 Feet x 8 Feet (7.32 mt Long and 2.44 mt Hight, Back Support of 1.5".	Nos	Separate Specification Sheet Attached
202	Movable Goal Posts Made with branded high-quality MS Steel Pipe in 4" Dia of Branded Epoxy Paint with Rust & Corrosion Free and Zero Vibration the Size: 24 Feet x 8 Feet (7.32 mt Long and 2.44 mt Hight, Back Support of 1.5" . The Poles Comprise wheels which make it easy to move with Goal Nets High Rigidity Material 4.5 mm machine knitted the color will be as per the standards requirements	Nos	Separate Specification Sheet Attached
203	Goal Nets High Rigidity Material 4.5 mm machine knitted the color will be as per the standards requirements	Nos	Separate Specification Sheet Attached
204	Corner Premium Flag Posts made of 25 mm pvc post with non-pointed top, unbreakable , flexible base , high signal optics,1.5 m high and 25 mm diameter	Nos	Separate Specification Sheet Attached
205	Field Marker that can mark Lines of the same width 12 cm using Machinery etc Completed As directed bt EIC.	Job	Separate Specification Sheet Attached
206	Providing and laying 400mtr length alluminum curbing IAAF approved make etc. Complete as directed by EIC	Nos	Separate Specification Sheet Attached
207	Providing and fixing (Chainlink Fencing) with fabrication of M.S. Angle vertical support of size 75x75x6 mm and horizontal support of 50x50x6 mm on top, centre and bottom with galvanize chain link 50x50 10 guage jali fitted with 40x6 mm M.S. flat including welding and erecting the same in position incement concrete (1:2:4) foundation blocks including excavation of size 600 x 600 x 900 mm, placing concrete, setting posts in line and level, and refilling around the foundation complete. Posts shall be provided at 3.00 m centre to centre spacing. with necessary excavation including two coats of oil Painting over single coat of primer etc complete as directed & inclurling one open able gate 3' ft wide and 7 ft in ht. including of two coats of oil paint on M.S. Structure as per drawing & directed by Engineer in charge	Sqm	Separate Specification Sheet Attached
208	Drilling 300mm dia.pilot hole hydrolic drilling machine & drilling trully vertically (testing by vertically test) bore hole in alluvial strata,any kind of soil incl.sand,murrum,hard murrum,soft rock,hard rock incl.cost of bentonite powder done by mud flushed rottary equipment bore hole should stand at least for 27hrs.incl.lowering the pipes in position as directed and incl.supplying and packing gravel of 4mm to 6 mm size etc. comp. as directed.	Rmt	Separate Specification Sheet Attached

NAME OF WORK :- Upgradation & Construction of multi outdoor sports facilities at Gandhidham District Sport Complex, Kutch.			
Separate Specification Sheet			
Sr. No.	Item of Work	Unit	Specification as per General Specification book aprooved by R&B Department for Building uploaded here with/Separate Sheet Attached
209	Supplying, assembling, lowering and fixing in vertical position in bore well, ERW (Electric Resistance Welded) FE 410 mild steel screwed and socketed/plain ended casing pipes of required dia, conforming to IS: 4270, of reputed & approved make, including painted with outside surface with two coats of anticorrosive paint of approved brand and manufacture, including required hire & labour charges, fittings & accessories, all complete, for all depths, as per direction of Engineer-in-charge. (B) 200 mm nominal 6 mm thick	Rmt	Separate Specification Sheet Attached
210	Development of hole by air compressor having capacity 400 cfm/100 psi till sand free discharge of water incl.testing of water supply flow etc. comp. as directed.	Job	Separate Specification Sheet Attached
211	Providing & laying approved make ISI marked HDPE 6Kg / cm2 (Class-3) as per IS:4984:1995 PE-80 to be erected at road crossing on or floor as directed for laying of cable. The pipes as following size of dia & weight per 6 mtr (B) 50 mm inner Dia.	Rmt	Separate Specification Sheet Attached
212	Supplying & Fixing 50 mm dia heavy top bottom piece, G.I. Bend, Coupling, sand guard MS clamp with Nut Bolt etc. complete as directed by EIC.	Set	Separate Specification Sheet Attached
213	Water Analysis test in Govt.approved laboratory incl. all water testing etc. comp. as directed	Nos	Separate Specification Sheet Attached
214	Providing water harvesting pit of 5.50 m Dia well and 2.46 mt x 2.46mt x 4.00 mt size brick masonry well for water logging with excavation in any strata upto four meter depth, filling the pit with B.T. Metal 40 mm in 0.80 mt. depth with 25-40mm kapachi, 0.80 mt. depth and 0.50 mt. depth with coarse sand & charcoal in layers including making P.V.C. line for water inlet etc. as directed with 300mm dia bore 40 mt. depth and 200mm dia UPVC CM type casing pipe as slott 1.5 to 2.0 mm size and ordinary pipe with gravel packing or as directed.	Job	Separate Specification Sheet Attached
215	Providing and constructing filter chamber of size 1.50 x 1.50 x 1.50 mt. as directed including connection rainwater pipes as per detailed as directed by Engineer in charge including cost of labour and material	Nos	Separate Specification Sheet Attached
216	Electrical Work : Supply of 400 KVA Outdoor type Compact Substation consisting of Transformer, HT switchgear and LT Switchgear and confirming to IEC-62227. a) Transformer: 400 KVA Copper wound 11KV /433 V DYN11, Dry Cast resin type Transformer with tapping range +10 to -10% @ 2.5% (with tolerance), class F , with surge restorers, Digital WTI, IS1171 as per b) HT Compartment: 11KV, 21kA for 3 Sec . 630 A 50 Hz, gas insulated VCB in SS tank in sheet enclosure having provision for one no. direct connection of Incoming supply cable upto 300sq mm and one no. VCB(Manually charging & closing) in series with LBS between VCB and Transformer, Self Powered Relay 3 O/C +1 E/F Relay type CSPR-V5, mechanical ON/OFF indicator, trip coil , Manual Close & Trip PB, live cable indicator, mechanical interlocks, pad locking facility, SF6 gas manometer, cable boots, 3 nos. CTs with Ratio -/1A, CI: 5P10, 2.5 VA for protection c) LV side compartment : one no. MCCB of 630A, 36kA, 4Pole, Microprocessor based release with arrangement for bottom cable termination (100% for phase & 50% for N, Current density - 1A/ sq mm) The enclosure should be of IK10 type.The Enclosure shall construction shall be GI of thickness at least 1.6/2mm.The enclosure shall be Powder Coated. Each compartment will be provided with the door and pad locking arrangement. The Compartment illumination lamp with door operated switch shall be provided for each compartment. The Transformer compartment will have IP-34 ingress protection, whereas the HT/LT compartment will have IP-54 protection.The connection between HT and Transformer shall be by 3 runs of single core 95 sq mm XLPE aluminium cable and between Transformer to LT switchgear shall be by appropriate rating Aluminium PVC sleeved Busbar	Ea.	Separate Specification Sheet Attached
	DG SET : Supplying and erecting, commissioning and testing of Diesel Generating set confirming to IS: 4722:1968 & BS:5514 having continuous rating, 3 phase, 415 volts, 50 cycles A.C. supply comprising of a totally enclosed air/water cooled diesel engine with multi-cylinders developing suitable BHP not less than following capacity at 1500 RPM with 10% overload for one hour in 24 hours with standard accessories like fly wheel, lubricating oil cooler, "A" class governor, heavy duty fuel wheel and lubricating oil filter, oil bath air filler, lubricating oil pressure gauge, end exhaust manifold, standard set of tools with adjustable spanners, screw drivers, cylinder head to cover, joint cylinder head to exhaust, element lube oil filter, 12 / 24 volts electric starting equipment complete with standard heavy duty battery, dynamo, cut-outs, ammeter, necessary wiring, pressure gauge, starter etc and heavy duty Residential type exhaust silencer (With DEF System) and vertical hot air duct both logged with asbestos rope, save oil trays, exhaust piping of required length, standard wall/floor mounted fuel with level indicator and piping and drip proof alternator, self excited, self regulated, screen protected, with excitation system, capable of delivering the rated system output at 415 volts, 3 phase, 0.8 PF, 50 Hz, 4 wire, running at 1500 RPM, conforming to IS-4722- 1968 with voltage regulation +/- 5% of rated voltage from no load to full load. Both the engine and alternator fitted on a common fabricated steel base plate with antivibration mounting engine and alternator both connected to each other by flexible flange coupling and with floor/wall mounted control panel box comprising of voltmeter ammeter, selector switches, ACB / MCCB / MCB of adequate capacity, indicator lamps duly wired with HRC fuses. The alternator & control panel shall be connected with provided suitable capacity armoured cable and complete with Acoustic enclosure (canopy) made out of 16 SWG CRCA Sheet, sound absorbing material Rockwool of 64 density & 100 mm thick conforming to IS:8183 / PU Foam of 40 Density - at least 40 mm. The resin bonded rockwool covered from inside the canopy by perforated sheet with 3/4 mm holes, sound level not more than 75 dB at a distance of 1 mtr, as per PVCT norms.DG set should have in built fuel tank capacity of minimum 8 hrs of continous running capacity on full load .		

NAME OF WORK :- Upgradation & Construction of multi outdoor sports facilities at Gandhidham District Sport Complex, Kutch.			
Separate Specification Sheet			
Sr. No.	Item of Work	Unit	Specification as per General Specification book approved by R&B Department for Building uploaded here with/Separate Sheet Attached
217	Erection, commissioning and satisfactory testing as per requirement with first filling of fuel (minimum up to the 80% of fuel tank capacity), oil, etc. with guarantee / Warrantee of complete system for Two years. & with obtaining all necessary certificate from Electrical Inspector. The Capacity and Ratings of DG sets are as below. (As per new CPCB4+ Emission norms Engine With - Turbo Charger, EGR (Exhaust Gas Recirculation), CRS (Common Rail Fuel System), DOC (Diesel Oxidation Catalyst), SCR (Selective Catalytic Reduction), Integrated wiring harness connected to ECU .) (U) Continuous rating of 400 KVA ,BHP not less than 480 BHP	Ea.	Separate Specification Sheet Attached
218	AMF panel : Providing & erecting approved make AMF control panel suitable for following size of 3 phase, 415 V., 50 cycles, A.C. diesel generating set complete of scope as detailed below: 1) Power module: A pair of electromechanically interlocked contactors (for mains & generator) Overload relay for generator contactor Neutral contactor for mains and generator Power socket for connections. 2) Control and metering module: Line voltage monitor. Generator voltage monitor Ammeter 3 items attempt start facility. Air circuit breakers/MCB/MCCB of suitable rating for auto/manual operation. Auto/manual switch. Emergency stop push buttons. Manual start push button. frequency meter. Engine hour meter. Two earthing studs. 3) Protection module: The engine shutdown in the unlikely event of Low lube oil pressure High cylinder head temperature. V belt failure. 4) Indicators with alarm Load on generator. 5) Indicators Load on mains Engine fails to start . Emergency stop battery charger. The AMF Panel of following capacity (F) AMF Control Panel for 380 KVA/ 400 KVA3 phase DG Set	Ea.	Separate Specification Sheet Attached
219	PANELS : Design, Supplying, installing, testing of factory fabricated ready made Three phase APFC Panel Cubical Panel fabrication should be type tested as per IEC 61921, 61439:1&2 Capacitor Duty Contactor for switching as per following Steps Incomer Switch of MCCB type Icu=Ics=50KA at 400/440 Volts, with OC, SC, internal earth fault protection Incomer Switch of MCCB type Icu=Ics=50KA at 400/440 Volts, with OC, SC, internal earth fault protection,Copper tinned insulated Busbar,Cubical panel should be indoor type with IP 43 and IK 10,Metalized polypropylene film tye3-phase 550Volt Capacitor,De tuning Reactor for each capacitor,Panel having Short Circuit and Overload protection,Each step Capacitor having suitable MCB with Sc, OL, internal earth fault relay,Each stage having Stage Contactor (Capacitor load rating),PF regulator master controller having suitable steps with LCD display, Rs 485 Communication port, Indication LED Lamps for main incomer and ON-OFF for each capacitor bank,MS Chancel for Floor mounting, Cable entry as per site situation,Cooling fans for panel. (E)150KVAR	Ea.	Separate Specification Sheet Attached
220	Providing & erecting weather proof, dust & vermin proof, floor mounted front operated indoor type cubical panel board necessary IP-42 and above protection as per approval from engineer incharge made from 14 SWG thick CRC M.S. sheet for outer body & doors, 16 SWG thick CRC M.S.sheet for internal partitions with necessary accessories , supporting angles/ flats channel including cutting, bending, drilling, welding, riveting with internal partitions & cable alley as per requirements & instruction of engineer-in-charge with erection of supplied switch gears, BUSBARS, suitable size of inter connecting PVC copper wire / copper-aluminium strips, rubber grommets, rib, bakelite control fuses/MCB for measuring instruments, earth bus & earth bolts, foundation flange - bolts-base Plates, sufficient nos. of hinged doors, handles with locking arrangement and rubber gasket,heavy duty end terminal connection,danger notice board,necessary ventilation,earthing strip complete. The Panel shall be painted with epoxy powder coating. (The rates excludes the cost of switchgears, bus bars, inter connecting mains & Copper Aluminium strips, meters, Fuses etc. The dimension shall be measured excluding base beams) The panel shall be supplied with following approved manufacturers with following size. (B) The standard companies switch gear shall be used and only manufacturers at CPRI approved factory. (i) with 350mm depth.	Sq.Mtr	Separate Specification Sheet Attached
221	Providing & erecting weather proof, dust & vermin proof, floor mounted front operated indoor type cubical panel board necessary IP-42 and above protection as per approval from engineer incharge made from 14 SWG thick CRC M.S. sheet for outer body & doors, 16 SWG thick CRC M.S.sheet for internal partitions with necessary accessories , supporting angles/ flats channel including cutting, bending, drilling, welding, riveting with internal partitions & cable alley as per requirements & instruction of engineer-in-charge with erection of supplied switch gears, BUSBARS, suitable size of inter connecting PVC copper wire / copper-aluminium strips, rubber grommets, rib, bakelite control fuses/MCB for measuring instruments, earth bus & earth bolts, foundation flange - bolts-base Plates, sufficient nos. of hinged doors, handles with locking arrangement and rubber gasket,heavy duty end terminal connection,danger notice board,necessary ventilation,earthing strip complete. The Panel shall be painted with epoxy powder coating. (The rates excludes the cost of switchgears, bus bars, inter connecting mains & Copper Aluminium strips, meters, Fuses etc. The dimension shall be measured excluding base beams) The panel shall be supplied with following approved manufacturers with following size. (B) The standard companies switch gear shall be used and only manufacturers at CPRI approved factory. (ii) With 550 mm. Depth	Sq.Mtr	Separate Specification Sheet Attached

NAME OF WORK :- Upgradation & Construction of multi outdoor sports facilities at Gandhidham District Sport Complex, Kutch.			
Separate Specification Sheet			
Sr. No.	Item of Work	Unit	Specification as per General Specification book aprooved by R&B Department for Building uploaded here with/Separate Sheet Attached
222	Providing , erecting , fabricating the M.S. structure as per requirement on site incorporating proper size of M.S. angles,square,round, flats, bars, channels, sections complete with cutting, welding, grinding & finishing duly painted with one coat of red oxide with erection on site as per direction of engineer in charge with necessary grouting, cementing, plastering & finishing complete.	Kg.	Separate Specification Sheet Attached
223	Providing and erecting multifunctional meter suitable for application of Power monitoring and showing measurement of following Voltage, Frequency, Apparent energy, Apparent power, Active and reactive energy, Active and reactive power, Average voltage Vavg, Peak demand power PM, QM, SM, Demand power P, Q, S, Apparent power S, S1, S2, S3, Unbalance current, Power factor and displacement PF (signed, four quadrant), Calculated neutral current, Active, reactive, apparent energy (signed, four quadrant), Active power P, P1, P2, P3, Voltage U21, U32, U13, V1, V2, V3, Phase currents, Average current lag, Peak demand currents, Reactive power Q, Q1, Q2, Q3, Demand current I1, I2, I3, [Us] rated supply voltage 40...300 V AC 45...65 Hz, 40...300 V DC, Network frequency 50 Hz, Type of network 3P, Display type 7 segments LED, Display colour Red, Messages display capacity 3 fields of 4 characters, Display digits 12 digit(s) - 14.2 mm in height	Ea.	Separate Specification Sheet Attached
224	Supplying and erecting approved make suitable panel indicator LED type lamp, lens cover, complete erected with necessary connections.	Ea.	Separate Specification Sheet Attached
225	BUSBAR : Supplying and erecting triple pole & neutral 440V/ 500V panel mounting Aluminium Busbars with four equal Nos. of bus having current density not more than 0.8 Amp. / sq.mm (Rated current / cross section area) duly wrapped with colour insulating tape for phase sequence of following current carrying capacity, erected with necessary bus bar supports /insulators, main cable socket to each busbar,erected in existing cubical panel with necessary connections. (A) Suitable for 100 Amp. Capacity	Mtr.	Separate Specification Sheet Attached
226	BUSBAR : Supplying and erecting triple pole & neutral 440V/ 500V panel mounting Aluminium Busbars with four equal Nos. of bus having current density not more than 0.8 Amp. / sq.mm (Rated current / cross section area) duly wrapped with colour insulating tape for phase sequence of following current carrying capacity, erected with necessary bus bar supports /insulators, main cable socket to each busbar,erected in existing cubical panel with necessary connections. (B) Suitable for 200 Amp. Capacity	Mtr.	Separate Specification Sheet Attached
227	BUSBAR : Supplying and erecting triple pole & neutral 440V/ 500V panel mounting Aluminium Busbars with four equal Nos. of bus having current density not more than 0.8 Amp. / sq.mm (Rated current / cross section area) duly wrapped with colour insulating tape for phase sequence of following current carrying capacity, erected with necessary bus bar supports /insulators, main cable socket to each busbar,erected in existing cubical panel with necessary connections. (D) Suitable for 400 Amp. Capacity	Mtr.	Separate Specification Sheet Attached
228	BUSBAR : Supplying and erecting triple pole & neutral 440V/ 500V panel mounting Aluminium Busbars with four equal Nos. of bus having current density not more than 0.8 Amp. / sq.mm (Rated current / cross section area) duly wrapped with colour insulating tape for phase sequence of following current carrying capacity, erected with necessary bus bar supports /insulators, main cable socket to each busbar,erected in existing cubical panel with necessary connections. (F) Suitable for 800 Amp. Capacity	Mtr.	Separate Specification Sheet Attached
229	MCCB : Providing and erecting Approved make Four pole moulded case circuit breaker having breaking capacity ICU of 25 KA. at 415 V,having normal current rating up to 25 A to 100A. with Fixed thermal & magnetic release suitable to work on A.C. supply 50 c/s. with all internal connections, spreader tinned copper & complete erected in existing 16 G.M.S. housing. ICS=100% of ICU only Cat III	Ea.	Separate Specification Sheet Attached
230	Providing and erecting Approved make Four pole moulded case circuit breaker having breaking capacity ICU of 35 KA. at 415 V. having normal current rating 125A. with Fixed thermal & magnetic release suitable to work on A.C.supply 50 c/s. with all internal connections, spreader tinned copper & complete erected in existing 16 G.M.S. housing. ICS=100% of ICU only Cat III	Ea.	Separate Specification Sheet Attached
231	Providing and erecting Approved make Four pole moulded case circuit breaker having breaking capacity ICU of 35 KA. at 415 V. having Normal current rating 200A.with variable Thermal & magnetic release suitable to work on A.C.supply 50 c/s. with all internal connections, spreader tinned copper & complete erected in existing 16 G.M.S.housing ICS=100% of ICU only Cat III	Ea.	Separate Specification Sheet Attached
232	Providing and erecting Approved make Four pole moulded case circuit breaker having breaking capacity ICU of 35 KA. and above at 415 V . having normal current rating 250A. with variable thermal & magnetic release suitable to work on A.C.supply 50 c/s. with all internal connections, spreader tinned copper & complete erected in existing 16 G.M.S. housing. ICS=100% of ICU only Cat III	Ea.	Separate Specification Sheet Attached
233	Providing and erecting Approved make Four pole moulded case circuit breaker having breaking capacity ICU of 50 KA and above at 415 V having Normal current rating 400A. with variable Thermal & magnetic release suitable to work on A.C.supply 50 c/s. With all internal connections, spreader tinned copper & complete erected in existing 16 G.M.S. housing. ICS=100% of ICU only Cat III	Ea.	Separate Specification Sheet Attached
234	Providing and erecting Approved make Four pole moulded case circuit breaker having breaking capacity ICU of 50 K.A. and above at 415 V having normal current rating up to 630A. with variable thermal & magnetic release suitable to work on A.C.supply 50 c/s. with all internal connections, spreader tinned copper & complete erected in existing 16 G.M.S. housing ICS=100% of ICU only Cat III	Ea.	Separate Specification Sheet Attached

NAME OF WORK :- Upgradation & Construction of multi outdoor sports facilities at Gandhidham District Sport Complex, Kutch.			
Separate Specification Sheet			
Sr. No.	Item of Work	Unit	Specification as per General Specification book approved by R&B Department for Building uploaded here with/Separate Sheet Attached
235	Providing and erecting Approved make Earth fault Relay suitable to mount with inter connection suitable to following size of moulded case circuit breaker having CT ratio & MCCB rating as following along with shunt trip 220V AC. with all internal connections & complete erected in existing M.S.housing.. (4) 600 A -800 A , CT Ratio 1/800	Ea.	Separate Specification Sheet Attached
236	Providing and erecting following additional parts for panel mounting MCCBs (A)Extended operating rotary handle with pad lock with three position trip,off,on suitable for 25A to 250 A panel mounting cat-III	Ea.	Separate Specification Sheet Attached
237	Providing and erecting following additional parts for panel mounting MCCBs (B)Extended operating rotary handle with pad lock with three position trip,off,on suitable for 400A to 630 A panel mounting cat-III	Ea.	Separate Specification Sheet Attached
238	DNAGER NOTICE BOARD : Providing and erecting metallic vitrified danger notice board as per language suggested by engineer incharge for MEDIUM VOLTAGE installation to be erected as per IS-2551.	Ea.	Separate Specification Sheet Attached
239	Providing and erecting metallic vitrified danger notice board as per language suggested by engineer incharge for HIGH VOLTAGE installation to be erected as per IS.-2551.	Ea.	Separate Specification Sheet Attached
240	Providing & erecting Medium Voltage Danger Notice Board sticker as per language suggested by engineer incharge of standard size as per IS-2551	Ea.	Separate Specification Sheet Attached
241	TIMER & CONTACTOR : Supplying & erecting approved make Digital time switch having lithium cell 6 years operative and operate battery backup 1 channel day clock with 14 memory programme, suitable to operate on 240V + 5%, 16A with, floating contacts Minimum switching setup time 1 minimum & LCD display. Also comprised permanent ON/OFF switching. Programming switches & housed in fire proof thermoplastic enclosure & transparent cover erected as required with necessary connection erected as directed.	Ea.	Separate Specification Sheet Attached
242	Supplying & erecting power contactor ,AC3 duty for time switch complete erected as per direction Cat III (D) 4 pole 440V 40 Amp.	Ea.	Separate Specification Sheet Attached
243	EXCAVATION : Making trench in Hard Murrum / Tar Road of suitable width of 90 cm or required depth for laying any size	Mtr.	Separate Specification Sheet Attached
244	DWC & RCC PIPES : Providing & laying. R.C.C. Hume pipe for cable to be laid 90 cm. below ground across the road crossing or on floor with necessary material in an approved manner and making the ground as per original. (E)150 mm dia	Mtr.	Separate Specification Sheet Attached
245	DWC & RCC PIPES : Providing & laying. R.C.C. Hume pipe for cable to be laid 90 cm. below ground across the road crossing or on floor with necessary material in an approved manner and making the ground as per original. (D) 250 mm dia	Mtr.	Separate Specification Sheet Attached
246	DWC & RCC PIPES : Providing & laying. R.C.C. Hume pipe for cable to be laid 90 cm. below ground across the road crossing or on floor with necessary material in an approved manner and making the ground as per original. (C) 300 mm dia	Mtr.	Separate Specification Sheet Attached
247	Providing & laying approved make Double walled corrugated pipes (DWC) of polyethylene(conforming to IS 14930 II)with necessary connecting accessories of same material at required depth in existing trench for laying of cable. below ground / road surface for enclosing cable (A)50 mm outer dia	Mtr.	Separate Specification Sheet Attached
248	Providing & laying approved make Double walled corrugated pipes (DWC) of polyethylene(conforming to IS 14930 II)with necessary connecting accessories of same material at required depth in existing trench for laying of cable. below ground / road surface for enclosing cable (B)90 mm outer dia	Mtr.	Separate Specification Sheet Attached
249	Providing & laying approved make Double walled corrugated pipes (DWC) of polyethylene(conforming to IS 14930 II)with necessary connecting accessories of same material at required depth in existing trench for laying of cable. below ground / road surface for enclosing cable (C)120 mm outer dia.	Mtr.	Separate Specification Sheet Attached
250	EARTH-PIT & EARTHING STRIP : Supplying & erecting earth pit of minimum bore dia.150mm size approved make Earthing Electrode consisting Pipe-in-Pipe Technology as per IS 3043-1987 made of corrosion free hot dipped G.I.Pipes having Outer pipe dia of 50mm having 80-200 Micron galvanising, Inner pipe dia of 25 mm having 200-250 Micron galvanising, connection terminal dia of 12mm with constant ohmic value surrounded by highly conductive compound with high charge dissipation suitable for following type of applications with chamber and heavy duty cover. (A)[approved make OEM has to submit test certificate including value of earth resistance of installation duly stamped and signed by agency and officer Incharge has to ensure the value of earthing resistance mentioned in test Certificate) & having back filling compound of (B) Inner chemical (CCM Compound)- Resistivity:- 0.2 ohm / meter testing as per IEC 62561-2017, Voltage drop:- < 1 volt at no load & dry form, Sulphar content:- <2%(C) Back fill Compound :- Earthing compound should be capable to retain moisture for long time Necessary test report must be submitted by Agency. (c) For Electrical Installation covering Transformer Neutrals, Lightning arrester Earthing, A.C.Plant & Sensitive Computer System(like Automation, SCADA) i.e independent Earthing in normal soil. Length of Pipe : 3.00 mtrs Back filling Compound :2 nos Bags of 25 Kg.	Ea.	Separate Specification Sheet Attached
251	Providing and erecting required size HOT deep Galvanised iron strip for earthing of H.T. , OCB/ ACB/ Transformer LT panel board, Motors etc. using proper clamp.	Kg.	Separate Specification Sheet Attached
252	CABLES : Supplying & erecting XLPE(IS:7098)(I)-88 ISI unarmoured copper cable 1.1 KV grade to be erected as directed of following size. (E) 3 core 2.5 Sq. mm	Mtr.	Separate Specification Sheet Attached
253	CABLES : Supplying & erecting XLPE(IS:7098)(I)-88 ISI unarmoured copper cable 1.1 KV grade to be erected as directed of following size. (F) 3 core 4 Sq. mm	Mtr.	Separate Specification Sheet Attached

NAME OF WORK :- Upgradation & Construction of multi outdoor sports facilities at Gandhidham District Sport Complex, Kutch.			
Separate Specification Sheet			
Sr. No.	Item of Work	Unit	Specification as per General Specification book approved by R&B Department for Building uploaded here with/Separate Sheet Attached
254	Providing and erecting XLPE(IS:7098)(I)-88 ISI armoured cable multistrand Aluminium conductor for 1.1 KV. to be laid on wall with necessary clamps or in existing trench / pipe of following size of cables. (C) 3 core 6 Sq. mm	Mtr.	Separate Specification Sheet Attached
255	Providing and erecting XLPE(IS:7098)(I)-88 ISI armoured cable multistrand Aluminium conductor for 1.1 KV. to be laid on wall with necessary clamps or in existing trench / pipe of following size of cables. (D) 3 core 10 Sq. mm	Mtr.	Separate Specification Sheet Attached
256	Providing and erecting XLPE(IS:7098)(I)-88 ISI armoured cable multistrand Aluminium conductor for 1.1 KV. to be laid on wall with necessary clamps or in existing trench / pipe of following size of cables. (B) 3 1/2 core 35 Sq. mm (16 Sq. mm 1/2 core)	Mtr.	Separate Specification Sheet Attached
257	Providing and erecting XLPE(IS:7098)(I)-88 ISI armoured cable multistrand Aluminium conductor for 1.1 KV. to be laid on wall with necessary clamps or in existing trench / pipe of following size of cables. (C) 3 1/2 core 50 Sq. mm (25 Sq.1/2 mm core)	Mtr.	Separate Specification Sheet Attached
258	Providing and erecting XLPE(IS:7098)(I)-88 ISI armoured cable multistrand Aluminium conductor for 1.1 KV. to be laid on wall with necessary clamps or in existing trench / pipe of following size of cables. (D) 3 1/2 core 70 Sq. mm (35 Sq. mm 1/2 core)	Mtr.	Separate Specification Sheet Attached
259	Providing and erecting XLPE(IS:7098)(I)-88 ISI armoured cable multistrand Aluminium conductor for 1.1 KV. to be laid on wall with necessary clamps or in existing trench / pipe of following size of cables. (E) 3 1/2 core 95 Sq. mm (50 Sq. mm 1/2 core)	Mtr.	Separate Specification Sheet Attached
260	Providing and erecting XLPE(IS:7098)(I)-88 ISI armoured cable multistrand Aluminium conductor for 1.1 KV. to be laid on wall with necessary clamps or in existing trench / pipe of following size of cables. (F) 3 1/2 core 120 Sq. mm (70 Sq. mm 1/2 core)	Mtr.	Separate Specification Sheet Attached
261	Providing and erecting XLPE(IS:7098)(I)-88 ISI armoured cable multistrand Aluminium conductor for 1.1 KV. to be laid on wall with necessary clamps or in existing trench / pipe of following size of cables. (G) 3 1/2 core 150 Sq. mm (70 Sq. mm 1/2 core)	Mtr.	Separate Specification Sheet Attached
262	Providing and erecting XLPE(IS:7098)(I)-88 ISI armoured cable multistrand Aluminium conductor for 1.1 KV. to be laid on wall with necessary clamps or in existing trench / pipe of following size of cables. (H) 3 1/2 core 185 Sq. mm(120 Sq. mm 1/2 core)	Mtr.	Separate Specification Sheet Attached
263	Providing and erecting XLPE (IS:7098)(I)-88 ISI armoured cable multistrand / Solid Aluminium conductor for 1.1 KV. to be laid on wall with necessary clamps or in existing trench / pipe of following size of cables. (A) 4 core 4 Sq. mm	Mtr.	Separate Specification Sheet Attached
264	Providing and erecting XLPE (IS:7098)(I)-88 ISI armoured cable multistrand / Solid Aluminium conductor for 1.1 KV. to be laid on wall with necessary clamps or in existing trench / pipe of following size of cables. (B) 4 core 6 Sq. mm	Mtr.	Separate Specification Sheet Attached
265	Providing and erecting XLPE (IS:7098)(I)-88 ISI armoured cable multistrand / Solid Aluminium conductor for 1.1 KV. to be laid on wall with necessary clamps or in existing trench / pipe of following size of cables. (C) 4 core 10 Sq. mm	Mtr.	Separate Specification Sheet Attached
266	Providing and erecting XLPE (IS:7098)(I)-88 ISI armoured cable multistrand Aluminium conductor for 1.1 KV. to be laid on wall with necessary clamps or in existing trench / pipe of following size of cables (A) 4 core 16 Sq. mm	Mtr.	Separate Specification Sheet Attached
267	Providing and erecting XLPE (IS:7098)(I)-88 ISI armoured cable multistrand Aluminium conductor for 1.1 KV. to be laid on wall with necessary clamps or in existing trench / pipe of following size of cables (B) 4 core 25 Sq. mm	Mtr.	Separate Specification Sheet Attached
268	TERMINATIONS : Providing and, fixing heavy duty flange type brass cable gland with rubber ring for PVC insulated armoured cable complete with out going tails, insulating tape etc for following size of cables. (A) 2 to 4 core 2.5 / 4 Sq. mm	Ea.	Separate Specification Sheet Attached
269	Providing and, fixing heavy duty flange type brass cable gland with rubber ring for PVC insulated armoured cable complete with out going tails, insulating tape etc for following size of cables. (B) 2 to 4 core 6 Sq. mm	Ea.	Separate Specification Sheet Attached
270	Providing and, fixing heavy duty flange type brass cable gland with rubber ring for PVC insulated armoured cable complete with out going tails, insulating tape etc for following size of cables. (C) 2 to 4 core 10 Sq. mm	Ea.	Separate Specification Sheet Attached
271	Providing and, fixing heavy duty flange type brass cable gland with rubber ring for PVC insulated armoured cable complete with out going tails, insulating tape etc for following size of cables. (D) 2 to 4 core 16 Sq. mm	Ea.	Separate Specification Sheet Attached
272	Providing and, fixing heavy duty flange type brass cable gland with rubber ring for PVC insulated armoured cable complete with out going tails, insulating tape etc for following size of cables. (E) 2 to 4 core 25 Sq. mm	Ea.	Separate Specification Sheet Attached
273	Providing and, fixing heavy duty flange type brass double compression type cable gland with rubber ring for PVC insulated armoured cable complete with out going tails, insulating tape etc for following size of cables. (B) 3 1/2 core 35 Sq. mm (16 Sq. mm 1/2 core)	Ea.	Separate Specification Sheet Attached
274	Providing and, fixing heavy duty flange type brass double compression type cable gland with rubber ring for PVC insulated armoured cable complete with out going tails, insulating tape etc for following size of cables. (C) 3 1/2 core 50 Sq. mm (25 Sq.1/2 mm core)	Ea.	Separate Specification Sheet Attached
275	Providing and, fixing heavy duty flange type brass double compression type cable gland with rubber ring for PVC insulated armoured cable complete with out going tails, insulating tape etc for following size of cables. (D) 3 1/2 core 70 Sq. mm (35 Sq. mm 1/2 core)	Ea.	Separate Specification Sheet Attached
276	Providing and, fixing heavy duty flange type brass double compression type cable gland with rubber ring for PVC insulated armoured cable complete with out going tails, insulating tape etc for following size of cables. (E) 3 1/2 core 95 Sq. mm (50 Sq. mm 1/2 core)	Ea.	Separate Specification Sheet Attached
277	Providing and, fixing heavy duty flange type brass double compression type cable gland with rubber ring for PVC insulated armoured cable complete with out going tails, insulating tape etc for following size of cables. (F) 3 1/2 core 120 Sq. mm (70 Sq. mm 1/2 core)	Ea.	Separate Specification Sheet Attached

NAME OF WORK :- Upgradation & Construction of multi outdoor sports facilities at Gandhidham District Sport Complex, Kutch.			
Separate Specification Sheet			
Sr. No.	Item of Work	Unit	Specification as per General Specification book approved by R&B Department for Building uploaded here with/Separate Sheet Attached
278	Providing and, fixing heavy duty flange type brass double compression type cable gland with rubber ring for PVC insulated armoured cable complete with out going tails, insulating tape etc for following size of cables. (G) 3 1/2 core 150 Sq. mm (70 Sq. mm 1/2 core)	Ea.	Separate Specification Sheet Attached
279	Providing and, fixing heavy duty flange type brass double compression type cable gland with rubber ring for PVC insulated armoured cable complete with out going tails, insulating tape etc for following size of cables. (H) 3 1/2 core 185 Sq. mm(120 Sq. mm 1/2 core)	Ea.	Separate Specification Sheet Attached
280	LUGS : Solder less crimping type Aluminium lugs conforming to IS suitable for cable of following size evenly crimped with high pressure tool & connected to switchgear terminals with brass/cadmium plated nut bolts in an approved manner. (A) 1.5/ 2.5/4/6 Sq.mm	Ea.	Separate Specification Sheet Attached
281	LUGS : Solder less crimping type Aluminium lugs conforming to IS suitable for cable of following size evenly crimped with high pressure tool & connected to switchgear terminals with brass/cadmium plated nut bolts in an approved manner. (B) 10 Sq.mm	Ea.	Separate Specification Sheet Attached
282	LUGS : Solder less crimping type Aluminium lugs conforming to IS suitable for cable of following size evenly crimped with high pressure tool & connected to switchgear terminals with brass/cadmium plated nut bolts in an approved manner. (C) 16/25 Sq.mm.	Ea.	Separate Specification Sheet Attached
283	LUGS : Solder less crimping type Aluminium lugs conforming to IS suitable for cable of following size evenly crimped with high pressure tool & connected to switchgear terminals with brass/cadmium plated nut bolts in an approved manner. (D) 35/50 Sq.mm.	Ea.	Separate Specification Sheet Attached
284	LUGS : Solder less crimping type Aluminium lugs conforming to IS suitable for cable of following size evenly crimped with high pressure tool & connected to switchgear terminals with brass/cadmium plated nut bolts in an approved manner. (E) 70 Sq.mm.	Ea.	Separate Specification Sheet Attached
285	LUGS : Solder less crimping type Aluminium lugs conforming to IS suitable for cable of following size evenly crimped with high pressure tool & connected to switchgear terminals with brass/cadmium plated nut bolts in an approved manner. (F) 95 Sq.mm.	Ea.	Separate Specification Sheet Attached
286	LUGS : Solder less crimping type Aluminium lugs conforming to IS suitable for cable of following size evenly crimped with high pressure tool & connected to switchgear terminals with brass/cadmium plated nut bolts in an approved manner. (G) 120 Sq.mm.	Ea.	Separate Specification Sheet Attached
287	LUGS : Solder less crimping type Aluminium lugs conforming to IS suitable for cable of following size evenly crimped with high pressure tool & connected to switchgear terminals with brass/cadmium plated nut bolts in an approved manner. (H) 150 Sq.mm.	Ea.	Separate Specification Sheet Attached
288	LUGS : Solder less crimping type Aluminium lugs conforming to IS suitable for cable of following size evenly crimped with high pressure tool & connected to switchgear terminals with brass/cadmium plated nut bolts in an approved manner. (I) 185 Sq.mm.	Ea.	Separate Specification Sheet Attached
289	DB, MCB & ENCLOSURE BOX : Providing and erecting Sheet Steel powder coated Vertical MCB distribution board (VTPN) - flush / surface mounted double door (IP54) fitted with insulated copper busbar, isolated neutral link, earth bar and DIN rail, confirming to IS 13032 and BS 5486-1986,IP-54 suitable for 63/100 AMP TPN MCCB + RCCB as incomer and three phase outgoing as per following .(The DBs should be used of same company of MCB to be used) (B)6 way outgoing	Ea.	Separate Specification Sheet Attached
290	DB, MCB & ENCLOSURE BOX : Providing and erecting Sheet Steel powder coated Vertical MCB distribution board (VTPN) - flush / surface mounted double door (IP54) fitted with insulated copper busbar, isolated neutral link, earth bar and DIN rail, confirming to IS 13032 and BS 5486-1986,IP-54 suitable for 63/100 AMP TPN MCCB + RCCB as incomer and three phase outgoing as per following .(The DBs should be used of same company of MCB to be used) (C)8 way outgoing	Ea.	Separate Specification Sheet Attached
291	providing and erecting Miniature circuit breaker single pole 6A to 25A suitable to operate on 240 V A.C. system and having breaking capacity 10 KA to be erected in existing box. confirming to IS 8828/1996 with ISI Mark Cat.III	Ea.	Separate Specification Sheet Attached
292	Providing & erecting 240 V MCB double pole switch for motor & inductive load (C Curve) having 10 KA breaking capacity & confirms to IS : 8828 in existing box having following capacity (A) 6 to 32 Amp. CAT.III	Ea.	Separate Specification Sheet Attached
293	Providing & erecting 240 V MCB double pole switch for motor & inductive load (C Curve) having 10 KA breaking capacity & confirms to IS : 8828 in existing box having following capacity (B) 40 Amp. CAT.III	Ea.	Separate Specification Sheet Attached
294	Providing & erecting 415 V MCB Four Pole for Motor & Inductive Load (C Curve) having 10KA breaking capacity & confirms to IS :8828 in existing box having following capacity (a) 6 to 32 Amp. Cat. III	Ea.	Separate Specification Sheet Attached
295	Providing & erecting 415 V MCB Four Pole for Motor & Inductive Load (C Curve) having 10KA breaking capacity & confirms to IS :8828 in existing box having following capacity (b)40 Amp. Cat.III	Ea.	Separate Specification Sheet Attached
296	Providing & erecting 415 V MCB Four Pole for Motor & Inductive Load (C Curve) having 10KA breaking capacity & confirms to IS :8828 in existing box having following capacity (c)63 Amp. CAT.III	Ea.	Separate Specification Sheet Attached
297	Providing & erecting 415 V MCB three Pole for Motor & Inductive Load (C Curve) having 10KA breaking capacity & confirms to IS:8828 in existing box having following capacity (a) 6 to 32 Amp.	Ea.	Separate Specification Sheet Attached
298	Providing & erecting 415 V MCB three Pole for Motor & Inductive Load (C Curve) having 10KA breaking capacity & confirms to IS:8828 in existing box having following capacity (b)40 Amp.	Ea.	Separate Specification Sheet Attached
299	Providing & erecting 415 V MCB three Pole for Motor & Inductive Load (C Curve) having 10KA breaking capacity & confirms to IS:8828 in existing box having following capacity (c)63 Amp.	Ea.	Separate Specification Sheet Attached
300	providing and erecting Approved make RCCBs conforming to IS: 12640 and having sensitivity of 30 mA and Short Circuit withstand capacity of 10 KA and suitable for operation on single phase 240 V,50Hz. having characteristic of quick action & tripping with all advance feature & do not incorporate any electronic component. for following Max. rating erected as directed (i) 25 Amps.DP Cat. III	Ea.	Separate Specification Sheet Attached

NAME OF WORK :- Upgradation & Construction of multi outdoor sports facilities at Gandhidham District Sport Complex, Kutch.			
Separate Specification Sheet			
Sr. No.	Item of Work	Unit	Specification as per General Specification book approved by R&B Department for Building uploaded here with/Separate Sheet Attached
301	providing and erecting Approved make RCCBs conforming to IS: 12640 and having sensitivity of 30 mA and Short Circuit withstand capacity of 10 KA and suitable for operation on single phase 240 V,50Hz. having characteristic of quick action & tripping with all advance feature & do not incorporate any electronic component. for following Max. rating erected as directed (ii) 40Amps. DP Cat. III	Ea.	Separate Specification Sheet Attached
302	providing and erecting Approved make RCCBs conforming to IS: 12640 and having sensitivity of 30 mA and Short Circuit withstand capacity of 10 KA and suitable for operation on single phase 240 V,50Hz. having characteristic of quick action & tripping with all advance feature & do not incorporate any electronic component. for following Max. rating erected as directed (iii) 63 Amps. DP Cat. III	Ea.	Separate Specification Sheet Attached
303	Providing and erecting Sheet Steel powder coated MCB distribution board - flush / surface mounted fitted with busbar, neutral link, earth bar and DIN rail, Conforms to IS 8623-1 & 3, IEC 61439-1 & 3 without MCB to house appropriate nos. of MCBs.(The DBs should be used of same company of MCB to be used) suitable for (A) single phase incoming and horizontal single phase outgoing (a) single door (IP-30) (i)4 way	Ea.	Separate Specification Sheet Attached
304	Providing and erecting Sheet Steel powder coated MCB distribution board - flush / surface mounted fitted with busbar, neutral link, earth bar and DIN rail, Conforms to IS 8623-1 & 3, IEC 61439-1 & 3 without MCB to house appropriate nos. of MCBs.(The DBs should be used of same company of MCB to be used) suitable for (A) single phase incoming and horizontal single phase outgoing (b) sheet steel double door (iv)12 way	Ea.	Separate Specification Sheet Attached
305	Providing and erecting Sheet Steel powder coated MCB distribution board - flush / surface mounted fitted with busbar, neutral link, earth bar and DIN rail, Conforms to IS 8623-1 & 3, IEC 61439-1 & 3 without MCB to house appropriate nos. of MCBs.(The DBs should be used of same company of MCB to be used) suitable for (B) three phase incoming and single phase horizontal type outgoing Per phase isolation type (PPI) (b) sheet steel double door (ii)6 way	Ea.	Separate Specification Sheet Attached
306	Providing and erecting Sheet Steel powder coated MCB distribution board - flush / surface mounted fitted with busbar, neutral link, earth bar and DIN rail, Conforms to IS 8623-1 & 3, IEC 61439-1 & 3 without MCB to house appropriate nos. of MCBs.(The DBs should be used of same company of MCB to be used) suitable for (B) three phase incoming and single phase horizontal type outgoing Per phase isolation type (PPI) (b) sheet steel double door (iii)8 way	Ea.	Separate Specification Sheet Attached
307	providing and erecting Approved make RCCBs conforming to IS: 12640 and having sensitivity of 30 mA and Short Circuit withstand capacity of 10 KA and suitable for operation on single phase 240 V,50Hz. having characteristic of quick action & tripping with all advance feature & do not incorporate any electronic component. for following Max. rating erected as directed. (ii) 40Amps. DP Cat. III	Ea.	Separate Specification Sheet Attached
308	providing and erecting Approved make RCCBs conforming to IS: 12640 and having sensitivity of 30 mA and Short Circuit withstand capacity of 10 KA and suitable for operation on single phase 240 V,50Hz. having characteristic of quick action & tripping with all advance feature & do not incorporate any electronic component. for following Max. rating erected as directed. (iii) 63 Amps. DP Cat. III	Ea.	Separate Specification Sheet Attached
309	POINT WIRING & PVC PIPES : Point wiring for Light / Bell with 2-1.5 sq.mm & earth wire of 1.5 sq.mm (Green) both are of ISI marked 1.1 KV grade FRLS PVC insulated multi strand copper wires up to 10 mtr length , in below type of pipe erected with 6A Modular type switch / bell push & accessories and earth continuity of following type, erected on PVC / Metallic/Wooden box, single mounting base frame covered with textured/metallic/white front plate modules erected on / in wall / ceiling as per pipe erected, with necessary Lamp holder/ceiling rose / H.D.Connector as directed. (f) with medium class Rigid PVC pipe and accessories erected concealed in wall/ceiling complete. Cat. III	Ea.	Separate Specification Sheet Attached
310	Point wiring for FAN with 2-1.5 sq.mm & earth wire of 1.5 sq.mm (Green) both are of .ISI marked 1.1 KV Grade FRLS PVC insulated multi strand copper wires up to 10 mtr length, in below type of pipe erected with 6A Modular type switch and hum free EME step type electronic fan regulator mounted and accessories with earth continuity of following type erected on PVC / Metallic/Wooden box, single mounting base frame covered with textured/metallic/white front plate modules erected on / in wall / ceiling as per pipe erected. with necessary ceiling rose / H.D.Connector as directed. (f) with medium class Rigid PVC pipe and accessories erected concealed in wall/ceiling complete. Cat. III	Ea.	Separate Specification Sheet Attached
311	Point wiring for Modular secondary light point with 2-1.5 sq.mm & earth wire of 1.5 sq.mm (green) both are of ISI marked 1.1 KV grade FRLS PVC insulated multi strand copper wires, in below type of pipe to be erected complete with earth continuity and necessary connection with primary light with accessories erected on Metal / PVC / wooden box covered with 3 mm thick PC(Polycarbonate) / Acrylic sheet for open / concealed wiring. with necessary Lamp holder / ceiling rose / H.D.Connector as directed. (f) with medium class Rigid PVC pipe and accessories erected concealed in wall/ceiling complete	Ea.	Separate Specification Sheet Attached

NAME OF WORK :- Upgradation & Construction of multi outdoor sports facilities at Gandhidham District Sport Complex, Kutch.			
Separate Specification Sheet			
Sr. No.	Item of Work	Unit	Specification as per General Specification book aprooved by R&B Department for Building uploaded here with/Separate Sheet Attached
312	Point wiring for Individual Plug with & earth wire of 1.5 sq.mm (Green) both are of ISI marked 1.1 KV grade FRLS PVC insulated multi strand copper wires up to 10 mtr length, in below type of pipe erected complete with Modular type switch & 5 pin Plug erected on PVC / Metallic/Wooden box covered with appropriate front plate modules erected on / in wall / ceiling as per pipe erected with following type of accessories. [I] For 6A Plug and 6 a switch with 2-1.5 sq.mm Cu. Wire from nearby switchboard/mcb db board. (f) with medium class Rigid PVC pipe and accessories erected concealed in wall/ceiling complete. Cat. III	Ea.	Separate Specification Sheet Attached
313	[II] For 16A Plug and 16 amp switch with 2-2.5 sq.mm Cu. Wire from mcb db board. (f) with medium class Rigid PVC pipe and accessories erected concealed in wall/ceiling complete. Cat. III	Ea.	Separate Specification Sheet Attached
314	Point wiring for on board Looped Plug with 6A Modular type switch & 5 pin socket erected on PVC / Metallic/Wooden box, single mounting base frame covered with textured / metallic/white front plate modules erected on / in wall / ceiling with following type accessories. Cat. III (f) with medium class Rigid PVC pipe and accessories erected concealed in wall/ceiling complete.	Ea.	Separate Specification Sheet Attached
315	Point wiring for Two Way Controlled Light Point with 2-1.5 sq.mm & earth wire of 1.5 sq.mm (green) both are of .ISI marked 1.1 KV grade FRLS PVC insulated multi strand copper wires erected in below type of pipe with 6A Modular type switches and following type of accessories erected on PVC / Metallic/Wooden box, single mounting base frame covered with textured / metallic/white front plate modules erected on / in wall / ceiling as per pipe erected. with necessary batten/angle holder or ceiling rose or H.D.Connector as directed. (f) with medium class Rigid PVC pipe and accessories erected concealed in wall/ceiling complete. Cat. III	Ea.	Separate Specification Sheet Attached
316	Providing following type of Modular Type Accessories mounted with PVC / metallic/Wooden box, single mounting base frame covered with textured / metallic/white front plate , modules erected with necessary connections as per site situation directed by Engineer In charge. (3) Two Pin/RJ-11 Telephone Socket [A] For One Gang	Ea.	Separate Specification Sheet Attached
317	Providing following type of Modular Type Accessories mounted with PVC / metallic/Wooden box, single mounting base frame covered with textured / metallic/white front plate , modules erected with necessary connections as per site situation directed by Engineer In charge. (7) Blank Plate Single. Cat.III	Ea.	Separate Specification Sheet Attached
318	Providing following type of Modular Type Accessories mounted with PVC / metallic/Wooden box, single mounting base frame covered with textured / metallic/white front plate , modules erected with necessary connections as per site situation directed by Engineer In charge. (8) Computer RJ-45 socket . Cat.III	Ea.	Separate Specification Sheet Attached
319	Providing and erecting ISI mark Medium class RIGID PVC PIPES of following size complete to be erected on/in wall or ceiling erected with necessary PVC fittings & Junction boxes fixed with adhesive solution & Clamps with following dia of pipes, in approved manner as directed. (b) 25 mm	Mtr.	Separate Specification Sheet Attached
320	Providing and erecting ISI mark Medium class RIGID PVC PIPES of following size complete to be erected on/in wall or ceiling erected with necessary PVC fittings & Junction boxes fixed with adhesive solution & Clamps with following dia of pipes, in approved manner as directed. (c) 32 mm	Mtr.	Separate Specification Sheet Attached
321	Providing and erecting ISI mark Medium class RIGID PVC PIPES of following size complete to be erected on/in wall or ceiling erected with necessary PVC fittings & Junction boxes fixed with adhesive solution & Clamps with following dia of pipes, in approved manner as directed. (d) 40 mm	Mtr.	Separate Specification Sheet Attached
322	Providing & erecting PVC Corrugated Flexible Conduit with required nos. of coupling, PVC bushes, Check-nuts etc. complete of following sizes. (2) 25 mm	Mtr.	Separate Specification Sheet Attached
323	Providing and erecting Mains with 1.1 KV grade FRLS PVC insulated ISI marked stranded Copper conductor wire in following type of pipe to be erected concealed in /flushed on wall/ceiling, with 1.5 sq. mm copper conductor FRLS PVC insulated stranded wire of green colour for earth continuity of following size. (A) With medium class Rigid PVC pipe and accessories. (a) 2 wire 1.5 sq. mm	Mtr.	Separate Specification Sheet Attached
324	Providing and erecting Mains with 1.1 KV grade FRLS PVC insulated ISI marked stranded Copper conductor wire in following type of pipe to be erected concealed in /flushed on wall/ceiling, with 1.5 sq. mm copper conductor FRLS PVC insulated stranded wire of green colour for earth continuity of following size. (A) With medium class Rigid PVC pipe and accessories. (b) 2 wire 2.5 sq. mm	Mtr.	Separate Specification Sheet Attached
325	providing and erecting Mains with 1.1 KV grade FRLS PVC insulated ISI marked stranded Copper conductor wire in following type of pipe to be erected in / on wall / ceiling with 2.5 sq. mm copper conductor FRLS PVC insulated stranded wire of green colour for earth continuity of following size (a) 2 wire 4 sq. mm	Mtr.	Separate Specification Sheet Attached
326	providing and erecting Mains with 1.1 KV grade FRLS PVC insulated ISI marked stranded Copper conductor wire in following type of pipe to be erected in / on wall / ceiling with 2.5 sq. mm copper conductor FRLS PVC insulated stranded wire of green colour for earth continuity of following size (h) 4 wire 6 sq. mm	Mtr.	Separate Specification Sheet Attached

NAME OF WORK :- Upgradation & Construction of multi outdoor sports facilities at Gandhidham District Sport Complex, Kutch.			
Separate Specification Sheet			
Sr. No.	Item of Work	Unit	Specification as per General Specification book aprooved by R&B Department for Building uploaded here with/Separate Sheet Attached
327	providing and erecting Mains with 1.1 KV grade FRLS PVC insulated ISI marked stranded Copper conductor wire in following type of pipe to be erected in / on wall / ceiling with 2.5 sq. mm copper conductor FRLS PVC insulated stranded wire of green colour for earth continuity of following size (i) 4 wire 10 sq. mm(use earth wire of 4 sq.mm)	Mtr.	Separate Specification Sheet Attached
328	Supplying & erecting approved make LAN cable of following size in existing pipe as per direction. [D] CAT - 6e	Mtr.	Separate Specification Sheet Attached
329	Providing & erecting Switch board for Computer or electric apparatus consisting of following modular type accessories mounted with PVC / Metallic concealed/open box with single mounting base frame covered with textured/metallic /white front plate,modules erected with necessary connections as directed 1 no. 6A/16A universal plug-switch combined. 3 nos. 6A Switch 3 nos. 6A 5 pin Plug For Modular Type Accessories. Cat. III	Ea.	Separate Specification Sheet Attached
330	PVC RACEWAY : Supply & installation of surface mounted U PVC snap-on adaptable trunking raceways, fabricated out of U-PVC to Off-White or approved shade as per IS 733 of thickness 2.0mm for the base and sides with all accessories like removable covers, joints ,height spacer,angles complete with necessary bends, suitable sized junction boxes and tees etc, Complete. (a)Size: 50x80mm PVC Raceways for Power & Data with 2 compartments above specifications.	Mtr.	Separate Specification Sheet Attached
331	TELEPHONE & EPABX : SITC of Digital / PCM / TDM EPABX System having SMT design, system with flexible universal slots. Inbuilt Auto attendant facility, Minimum 15 Nos. conference, Analog extension line, Calling GSM, E&M line, PRI / EI & VOIP program me through Analog telephone digital key from Ethernet, public address cord, shall have unrestricted simultaneous dialing facility, QSIG protocol on PRI, 95 / STD / ISD / Local-Locking, Class of Service, Quick Dial-Single Digit dialing of any two external number, Once only ring device, Chairman / Secretary - Do not disturb Facility, Power Down Mode, Hot Line, Hot Outward Dialing, Day Night Mode, Auto Call Back, Barge-in, Call Pick Up & Call Transfer, Call transfer while Ringing with Voice Guide System, (DISA), Caller ID (CLI), CLI Base ECF, CLI Base routing Internet Ready Port, External Music Port, Call Budgeting, Call Most Calculation (ASMDR), DID Direct Inverse Dialing, External Music Input, Fax Homing, Global Directory Printing with following capacities [[Approved by Competent Authority i.e. not Below the rank of Executive Engineer] [A] No of Extension 16 , No of Junctions 6, 8 Port IP Resource in-built, 4 Port Web base Video Conferencing, No of expandable ports : 48, Operators Console - 01 Compatible : ISDN	Ea.	Separate Specification Sheet Attached
332	Providing and erecting Standard Push button telephone (DTMF) Phones [[Approved by Competent Authority i.e. not Below the rank of Executive Engineer]	Ea.	Separate Specification Sheet Attached
333	Supplying & erecting approved make Telephone Cable electrolytic copper conductor PE insulation twisted in two pairs, & wrapped with FRLS PVC tape & sheathed with FRLS PVC or HFFR outer Jacket suitable for telephone wiring & confirming to C-DOT erected in existing pipe. of following size of conductors & nos.of pairs. With necessary connections. [A] Conductor Size 0.5 mm (b) Armoured [Jelly Filled] (1) Ten Pairs	Mtr.	Separate Specification Sheet Attached
334	LIGHT FIXTURES & FANS : Supplying and erecting LED indoor fittings with LEDs of wattage 0.2 Watt to 0.5 Watt assembled on single MCPCB, with housing used as a heat sink shall be made of thick sheet Steel conforming to IS: 513/CRCA/ aluminium die cast powder coated and high U.V. & corrosion resistance with diffuser with company mark/name 160V to 270V, Power Factor more than 0.95, THD < 15%, CCT 3000 K to 6500K, Luminaire efficacy> 85lumens/watt ,LED LED driver efficiency > 85 % (fitting required LM-79 & LM-80 Certificates)(NOTE: Below description have shown ranges of Wattage capacity of LED fittings.The Engineer incharge may select any wattage capacity between the ranges shown.) (iii) 18-20 Watts, Surge - 2KV,IP-20, conventional 4 feet	Ea.	Separate Specification Sheet Attached
335	Supplying and erecting led lamps with following wattage capacity of 220 to 240 voltage, minimum 15000 burning hours life, 500 V in built-surge protection,Polycarbonate diffuser, mounting suitable for E14 / E27 / B22 lamp holders, pf >= 0.5 (A) LED Lamps integral type, with PC diffuser suitable LAMP holder (iii) 10 to 15 watts Cat-III	Ea.	Separate Specification Sheet Attached
336	Supplying and erecting LED indoor fittings with LEDs of wattage 0.2 Watt to 0.5 Watt assembled on single MCPCB, with housing used as a heat sink shall be made of thick sheet Steel conforming to IS: 513/CRCA/aluminium pressure die cast powder coated and high U.V. & corrosion resistance with diffuser housed in aluminium casted body with company mark/name 160V to 270V,Power Factor more than 0.95, THD < 15 %, CCT 3000 K to 6500K, Luminaire efficacy> 85 lumens/watt ,LED driver efficiency > 85 % fitting required LM-79 & LM-80 Certificates)(NOTE: Below description have shown ranges of Wattage capacity of LED fittings.The Engineer incharge may select any wattage capacity between the ranges shown.) (A) Square/ Circular shaped Surface/Recessed Mount Downlight with provision for spring loaded mounting clips complete.IP20 (iii) 11-15 watts. Surge-2 KV	Ea.	Separate Specification Sheet Attached

NAME OF WORK :- Upgradation & Construction of multi outdoor sports facilities at Gandhidham District Sport Complex, Kutch.			
Separate Specification Sheet			
Sr. No.	Item of Work	Unit	Specification as per General Specification book aprooved by R&B Department for Building uploaded here with/Separate Sheet Attached
337	Supplying and erecting LED indoor fittings with LEDs of wattage 0.2 Watt to 0.5 Watt assembled on single MCPCB, with housing used as a heat sink shall be made of thick sheet Steel conforming to IS: 513/CRCA/aluminium pressure die cast powder coated and high U.V. & corrosion resistance with diffuser housed in aluminium casted body with company mark/name 160V to 270V,Power Factor more than 0.95, THD < 15 %, CCT 3000 K to 6500K, Luminaire efficacy> 85 lumens/watt ,LED driver efficiency > 85 %(fitting required LM-79 & LM-80 Certificates)(NOTE: Below description have shown ranges of Wattage capacity of LED fittings.The Engineer incharge may select any wattage capacity between the ranges shown.) (A) Square/ Circular shaped Surface/Recessed Mount Downlight with provision for spring loaded mounting clips complete.IP20 (iv) 22-24 watts Surge-2 KV Cat-III	Ea.	Separate Specification Sheet Attached
338	Supplying and erecting LED street light / Flood light fittings with High power White LEDs wattage of 3 Watt and above assembled on single MCPCB, efficiency more than 130 lm/w and corrosion free High pressure die cast aluminum housing with smooth finish powder coated and heat sink extruded aluminium with diffuser and Polycarbonate optics/ lenses, with toughened glass with company mark/name engraved or embossed 160 to 270 V,Power Factor more than 0.95, THD < 10 %, CCT 3000 K to 5700K,Uniformity ratio >0.45, Luminaire efficacy> 100 lumens/watt . LED driver efficiency > 85 %.(fittings required LM-79 & LM-80 certificates)(NOTE: Below description have shown ranges of Wattage capacity of LED fittings.The Engineer incharge may select any wattage capacity between the ranges shown.) (B) Flood Light (IP-65), Surge protection -4KV integral and ,Light must have 440VAC line supply with over-voltage protection. (iv) above 90 to 120 watts Cat-III	Ea.	Separate Specification Sheet Attached
339	Providing and erecting PVC body surface or pendent mounting LED Bulk type 9 watt Lighting Fitting with electronic driver. And lumen output from luminaire 720lm , input voltage range 90-300VAC , 50Hz cool white(3000 to 6500k), inbuilt driver, -20degC to +60degC working temperature, AL frame with Beam Angle 120deg	Ea.	Separate Specification Sheet Attached
340	Supplying and Erecting Of L.E.D. type High bay fixture having Power Consumption of following watts with, Input Voltage 110 - 290 V.AC with full efficiency, Power Factor > 0.9 with 50/60 HZ, CCVC LED Driver used for maximum power saving, Best Quality Aluminium alloy housing and aluminium Dome for better heat dissipation, CCT Cool white (6000K), CRI 80, Beam angle > 120 degrees, working temperature -20 deg c to +55 deg c, Body IP 65 (A) 70 to 90 watts	Ea.	Separate Specification Sheet Attached
341	Supply, Installation, Testing and Commissioning of suitable sweep, BEE 5 Star rated, Ceiling fan with Brush Less Direct Current (BLDC) permanent ferrite magnet Motor, class of insulation: B, Rust free 3 nos.Aluminium blades, 2 nos. canopies, shackle kit with earthing provision, copper winding, Power factor not < 0.9, Service Value (CMM/W) minimum 6.85, Air delivery minimum 215 CMM, 350 RPM,230v (tolerance as per IS : 374-2019), THD < 10%, compatible with electronic regulator unit for Speed Control and all remaining accessories including safety pin, nut bolts, washers, temperature rise = 75 degree C (Max.), suitable for 140 to 285 Voltage and rectifier circuit with surge, over current and overload protection , 50 Hz, Single phase AC Supply, earthing etc. Complete as required.[Make shall be approved by Engineer in Charge] (A) 1200 mm Sweep (48")	Ea.	Separate Specification Sheet Attached
342	Providing 2.5mm.thick laminated acrylic sheet to cover the fan hook or Fan box.	Ea.	Separate Specification Sheet Attached
343	Supplying and erecting 19 / 20 mm. nominal bore Medium Class M.S. Pipe down rod erected duly painted for fan complete with proper insulation without leakage and earthing.	Mtr.	Separate Specification Sheet Attached
344	Supplying & erecting fan hook box of 10 mm M.S. round bar bounded to the RCC bars up to 50mm length each side and pierced through a 16 Gauge M.S. box / Heavy Duty PVC box complete erected concealed in Ceiling with necessary finishing.	Ea.	Separate Specification Sheet Attached
345	Supplying & erecting approved make low noise decorative exhaust fan having square frame ABS body with inbuilt lowers & square frame. 200mm with 1350RPM Cat.II Cat.II	Ea.	Separate Specification Sheet Attached
346	STREET LIGHT POLE, HIGHMAST & LIGHT FIXTURES : Design, Supply, Installation, Testing & Commissioning of 30 Mtr (Height up to top of the head frame) Fixed type Stadium High Mast with Head frame and platform to support minimum 20 to 28 Nos of 1.2 to 1.25 KW Fixtures not more than 35Kgs with driver. The high Mast shall be made of continuously tapered polygonal sections of lengths to arrive at the specific height. The high mast shall be structurally designed in accordance with technical report no 7 published by institution for lighting engineer U.K. and to withstand the wind speed of 158 km/hr. as per IS 875 Part III. The mast section should be manufactured with special steel grade S 355 in compliance with BSEN 10025. Each section of the mast shall be hot dip galvanized through single dip process as per EN- ISO-1461:1999 and IS 11759-1985. Average thickness of galvanizing shall not be less than 85 micron. All welding shall be undertaken and performed as per BS 5135. The head frame shall be made of suitable steel grade duly galvanized and equipped with suitable provision for mounting of floodlights. Provision should be in the high mast for man rider unit to access the light fixtures. All MS part including hardware shall be hot dip galvanized as per BS729/BSENISO 1461 standard. Base section of the high mast shall be provided with weather proof service door having vandal resistance lock. Dimensional tolerance shall be as per BSEN 40. The specification High Mast , thickness of section (Bottom – 6mm , Middle -5 mm , Top -4mm) with Dia Top- 350mm , Bottom -880 mm , PCD-1000 mm , Base Plate-1120mm x 35 mm , with Bolt 16 Nos M39x850mm	Ea.	Separate Specification Sheet Attached

NAME OF WORK :- Upgradation & Construction of multi outdoor sports facilities at Gandhidham District Sport Complex, Kutch.			
Separate Specification Sheet			
Sr. No.	Item of Work	Unit	Specification as per General Specification book aprooved by R&B Department for Building uploaded here with/Separate Sheet Attached
347	Supplying and erecting approved make Octagonal pole made from HR sheet steel. The pole should be made as per IS. and shall be coated with hot dip galvanizing as per IS 2629/2633/4759, suitable suspend local wind speed with integral Junction box consist of terminal plate of min 6mm Hylam sheet, standard profile 35mmX7.5mm Din-Rail for MCB Mounting, stud type terminal and arrangement for cable termination to be erected With Suitable foundation (Included) as per details given by manufacturer considering site requirement. (K) 12 Mtr. Long 90 mm Top X 240 mm bottom dia, 4 mm thickness with 320mmX320mmX20mm base plate, 4-M24 Bolts and 850mm long with necessary G.I. J Bolts .Approx Pole weight 230 kg	Ea.	Separate Specification Sheet Attached
348	Supplying and erecting approved make Conical Pole (Medium Duty) Made from HR sheet steel. The pole should be made as per IS. and shall be coated with hot dip galvanizing as per IS 2629/2633/4759, with required base plate and integral Junction box consist of terminal plate of min 6mm Hylam sheet, standard profile 35mmX7.5mm Din-Rail for MCB Mounting, stud type terminal and arrangement for cable terminations as erected on suitable foundation (included) with necessary GI nut-bolts/J-Bolts. as per details given by manufacturer considering site requirement. The length of poles are as below. (G) 9 Mtr. Long 70 mm Top X 205 mm bottom dia, 3 mm thickness	Ea.	Separate Specification Sheet Attached
349	Providing and erecting Street Light pole bracket comprising main B Class GI pipe of 4.2 cm/require outside dia. complete with suitable B Class G.I. sleeve tubing of approx. 45cms.length and suitable for 76.5 mm /80mm / required size of pole top having sufficient fasteners for fixing the brackets and having spread of 1.5.mtr. length with 110 deg.with vertical plane & suitable welded stays, reducer and with check nuts complete painted with one coat of Red oxide / PU base primer and two coats of Aluminium / PU paint. paint with following nos of arms. [A] Single Arm Bracket 1.5 Mtr	Ea.	Separate Specification Sheet Attached
350	Providing 1:2:4 cement concrete foundation & 70 % PCC from bottom including excavation for the pole of size 60 x 60 x 150 cm. Deep in below ground level with plinth of 45 cm x 45 cm(or 45 cm dia x 45 cm) high upper ground level with necessary curing and finishing in approved manner. (for 9 & 10 mtr pole)	Ea.	Separate Specification Sheet Attached
351	Excavating hard Murrum or Metal road by chiselling for preparing pit for poles or earth plates or for laying pipes & clearing the site by removing debris & making site good.	Cu.Mtr	Separate Specification Sheet Attached
352	Providing & erecting approved make street light / wall mounting junction box compression moulded from SMC (thermoset plastic) vertical sliding cover having locking with square head stud loop in / loop out in built terminal suitable for four core cable, waterproof of I.P. 54 protected with clamp or bolt nut & earth bolt of following size. (A) 200mm x 127mm x 83 mm	Ea.	Separate Specification Sheet Attached
353	Supplying and erecting LED street light / Flood light fittings with High power White LEDs wattage of 3 Watt and above assembled on single MCPCB, efficiency more than 130 lm/w and corrosion free High pressure die cast aluminum housing with smooth finish powder coated and heat sink extruded aluminium with diffuser and Polycarbonate optics/ lenses, with toughened glass with company mark/name engraved or embossed 160 to 270 V,Power Factor more than 0.95, THD < 10 %, CCT 3000 K to 5700K,Uniformity ratio >0.45, Luminaire efficacy> 100 lumens/watt . LED driver efficiency > 85 %.(fittings required LM-79 & LM-80 certificates)(NOTE: Below description have shown ranges of Wattage capacity of LED fittings.The Engineer incharge may select any wattage capacity between the ranges shown.) (A) Street Light (IP-65), Surge protection -4KV integral and ,Light must have 440VAC line supply with over-voltage protection. (iii) Above 60 to 90 wattsCat-III	Ea.	Separate Specification Sheet Attached
354	Supply & Erecting of 350W LED Slim Flood Light with lumen output 38,500 lm, efficacy ≥110 lm/W, PF >0.95, THD <10%, IP66, IK07, 5kV surge protection, die-cast aluminium housing, complete with driver, mounting bracket and all accessories as required.	Ea.	Separate Specification Sheet Attached
355	Supply, Installation Testing and Commissioning of LED Floodlight luminaire with a U-mounting bracket and housing made of Single Die-cast Aluminum ADC1 with polycarbonate lens having CRI ≥ 90, SDCM<5 , Flicker <5% and CCT of 5700K and shall be compliant with IP66 and IK08 classification. Luminaire shall be designed to emit at least 100000 nominal lumens with maximum system wattage of 1000 to 1200W at a system efficacy of at least 120 lumen/watt.Luminaire shall have Following Optics Option For Better Light distribution NB/AWB/SMB/SWB/S3/S5/S6/S7/DX10. The luminaire shall be designed so as to ensure maximum lumen depreciation of up to 30% over 50k burning. The luminaire should have choice of Narrow beam, symmetrical medium and symmetrical wide beam suiting various applications with exposed PC optic lens. The luminaire should have fins on the back to ensure good heat dissipation and to prevent dirt from settling on the luminaire along with aiming angle scale. The luminaire should be marine salt protected, vibrations proof and wind force protected.The electronic driver should be fully integrated and shall have a power factor≥0.95 and THD ≤10% with a minimum inbuilt surge protection of 15kV inbuilt in the driver and suitable for an operating temperature range of -40 to 50 deg C. The luminaire should comply with all the required IEC and IS standards. LM79 and LM80 reports must be submitted from a NABL accredited laboratory. Luminaire and driver must have BIS certificate and the same must be submitted for records. For Proper Aiming luminaire should have provision for mounting of laser aiming device. Bidder Must Submit following test reports along with Bid 1.LM79 Report 2.LM 80 Report 3.BIS Certificates for both luminaire & driver 4.Photobiological report	Ea.	Separate Specification Sheet Attached

NAME OF WORK :- Upgradation & Construction of multi outdoor sports facilities at Gandhidham District Sport Complex, Kutch.			
Separate Specification Sheet			
Sr. No.	Item of Work	Unit	Specification as per General Specification book approved by R&B Department for Building uploaded here with/Separate Sheet Attached
356	RO & COOLER : Providing & erecting water cooler having storage capacity 150 Ltr. & cooling capacity 150 Ltr.per hour @ an ambient temp of 45° C. The outlet temp. of the water should drop by 15°C within a hour, The water cooler should be comprising of hermetically sealed compressor, fan motor, condensing unit, water tank surrounded by evaporating, coil, thermostats, relay etc.complete with necessary inlet & outlet connection. The body of water cooler will be made from Stainless Steel.	Ea.	Separate Specification Sheet Attached
357	Supplying & erecting reverse osmosis (RO) water purification system with M.S. powder coated pedestal frame, prefilter housing carbon filter suitable buster DC pump, auto low & high pressure switches with following size of LPH capacity & erected as directed [D] 100 LPH with 1 phase / 3 phase Raw water pump of 500LPH @ 2.5kg/cm2 - (1No - Kirloskar /CRI/Lubi), Dual media filter 10"x54" - (1 No), Micron cartridge filter 20" x 2.5" (1No), High pressure pump 500LPH @ 10kg/cm2 - (1No - Shimge /CRI /Lubi), RO Membrane housing with RO membrane of 40*40 - (1No), RO pressure tube 4" x 1E - (1No), 0 - 1200LPH Rotameter -(2 Nos), with Recovery Rate 50%.	Ea.	Separate Specification Sheet Attached
358	UPS : Supplying and erecting approved make online Un-interruptible Power Supply system comprising flat cum-boost charger with IGBT base rectifier & Inverter & sealed maintenance free SMF batteries. The charger having operating capacity for input 160-270V AC & inverter having output 230V,50 Hz Ac with 0.8 load power factor with battery, over/under voltage output with over load & short circuit protection equipment. The system housed in CRC sheet duly powder coated paint with following power backup.with MS painted batteries stand, 10% Overload capacity for momentary load. (c) 3 KVA with 1Hr Backup	Ea.	Separate Specification Sheet Attached
359	MISC. : Providing and fixing printed instruction chart both in English and Gujarati and duly framed with front glasses, for treatment of person suffering from Electric shock with minimum 50" diagonally size.	Ea.	Separate Specification Sheet Attached
360	Providing pair of rubber hand gloves suitable for working on 11 KV/22 KV supply.	Ea.	Separate Specification Sheet Attached
361	Supplying rubber matting of following thickness as per IS:15652/IEC 61111 (b)4mm	Sq.Mtr	Separate Specification Sheet Attached
362	Supplying stand first AID box with antiseptic cream, medicine for use on wounds due burn, crepe bandage, gauge bandage, medicated ready to use bandage (Band-aid) adhesive tape for medicinal user, Scissors, anti-septic solution (Savlon or similar) etc. (All above contents shall be of standard makes)	Ea.	Separate Specification Sheet Attached
363	Supplying FIRE bucket round bottom of 9 litres capacity made out of 24 gauge G.I. sheet with extra handle at bottom duly painted white inside and Red out side with FIRE mark, filled with dry-sand and kept on existing stand provided or hung on wall hook.	Ea.	Separate Specification Sheet Attached
364	Supplying and erecting floor mounting stand for keeping four nos. of FIRE buckets comprising 1500 mm in length, 900 mm height frame made out of 30mm X30 mm X 4 mm angle iron with cross supports for legs, welded with 4 hooks and duly painted with one coat of red lead and two coats of approved enamelled silver paint.	Ea.	Separate Specification Sheet Attached
365	ELV WORK : Supplying Installation Testing and Commissioning of 2 MP IP IR Dome Camera having following specifications, type of lens and features etc :- 1) Signal System: PAL/NTSC, Signal to Noise Ratio: >50 dB, Camera should display Camera title, Date & Time in live & recorded video 2)Image Sensor: 1/2.8" or better progressive Scan CMOS to get color image even at night condition(Minimum Illumination: 0.006 Lux@ F1.4, AGC ON, 0 lux with IR or better) True Day & Night High Performance Mechanical IR cut filter with autoswitch, Integrated IR Source (Auto, Manual)- Inbuilt IR LED's with effective distance upto 50 meter or better and 30 meter for colour view in night, Imaging: 1/3s to 1/30000s electronic shutter support, Auto Gain Control, White Balance- Auto, Back Light Compensation, Multi zone Privacy Masking, HLC, DigitalWatermarking. 3) Compression (Minimum):-Video:- H.265 or better, H.264H, H.264, Audio:- G.711U/A, G.711Mu, G.726,AAC, G.723 4) Wide Dynamic Range:- WDR (120db or more) 5) Digital Noise Reduction:- DNR (3D) On/Off 6) Video Streaming & Frame Rates :- Triple streaming, configurable (Main stream: 2MP (1920 x1080)@25/30 fps,Sub streams minimum: 720P@25/30 fps). 7) Image Setting: Rotate Mode, saturation, brightness,contrast, sharpness adjustable through client software or web browser, Edge Analytics: Tripwire, Intrusion, Motion Detection 8) Cyber Security: AES 256-bit Encryption, Configuration encryption, trusted execution, Digest, security logs, account lockout, syslog, video encryption, IP/MAC filtering, HTTPS, trusE173ted upgrade, trusted boot. 9) Onboard Storage: Camera should support built-in Micro SD/SDHC/SDXC Card slot upto 512 GB. It should be supplied with minimum 128GB memory Card. 280 DELHI SCHEDULE OF RATES (E&M)-2025	Ea.	Separate Specification Sheet Attached

NAME OF WORK :- Upgradation & Construction of multi outdoor sports facilities at Gandhidham District Sport Complex, Kutch.			
Separate Specification Sheet			
Sr. No.	Item of Work	Unit	Specification as per General Specification book aprooved by R&B Department for Building uploaded here with/Separate Sheet Attached
	<p>10) Recording Management: Format SD, overwrite,storage management, video to NAS device</p> <p>11) Alarm Trigger : Motion/tampering detection; audio detection; network disconnection detection; IP conflict detection; memory card state detection; memory space detection</p> <p>12)Network Protocol: SFTP, IPv6, IPv4, DNS,RTCP, NTP, RTP, HTTP, HTTPS, SNMP TCP/IP, PPPoE, NFS, UDP, ICMP, SSL, DHCP, SMTP, RTSPS,unicast</p> <p>13) System Capability: ONVIF, Camera shall support open source VMS</p> <p>14) Ethernet: 1 RJ 45 10/100 Ethernet port</p> <p>15) Audio : It should support 1 x Built-In Mic and 1/1 Alarm In/ Out for External Mic. and Speakers as per site requirement.</p> <p>16) Power Input: The camera should support simultaneous dual power input—12 VDC (via power adapter) and PoE (802.3af)—to ensure continuous operation in the event of a failure in one power source.</p> <p>17) Power Requirement: 12VDC/24 VAC/PoE (802.3af)/ePoE</p> <p>18) Housing/ Enclosure:- IP67 weather proof, IK10, Metallic body</p> <p>19) Operating Condition:- Ambient Temperature:- (-)05°C to 50°C, humidity 95% (max) (non-condensing)</p> <p>20) IR life: 40000 hours or higher</p> <p>21) Video Bit rate: 32 KBPS - 8 MBPS or better</p> <p>22) Standards: BIS with ER, STQC Certified, CE, FCC and RoHS</p> <p>2MP (@ 25/30fps@1080P (1920×1080)) IP IR Dome Camera with 2.8/ 3.6mm fixed lens</p>		
366	<p>2 MP IP IR Outdoor Bullet Camera</p> <p>Supplying Installation Testing and Commissioning of 2MP Fixed Lens IP IR Outdoor Bullet Camera having following specifications and features etc :-</p> <p>1) Signal System: PAL/NTSC, Signal to Noise Ratio: >50 dB,Camera should display Camera title, Date & Time in live & recorded video</p> <p>2)Image Sensor: 1/2.8" or better progressive Scan CMOS to get color image even at night condition(Minimum Illumination: 0.006 Lux@ F1.4, AGC ON, 0 lux with IR or better) True Day & Night High Performance Mechanical IR cut filter with auto switch, Integrated IR Source (Auto, Manual)- Inbuilt Smart IR LED's with effective distance upto 50 meter or better and 30 meter for colour view in night, Imaging: 1/3s to 1/30000s electronic shutter support, Auto Gain Control , White Balance- Auto, Back Light Compensation, Multi zone Privacy Masking, HLC,Digital Watermarking.</p> <p>3) Compression (Minimum):-Video:- H.265 or better, H.264H, H.264, Audio:- G.711U/A, G.711Mu, G.726,AAC, G.723</p> <p>4) Wide Dynamic Range:- WDR (120db or more)</p> <p>5) Digital Noise Reduction:- DNR (3D) On/Off</p> <p>6) Video Streaming & Frame Rates :- Triple streaming, configurable(Main stream: 2MP (1920 ×1080)@25/30 fps Sub streams minimum: 720P@25/30 fps).</p> <p>7) Image Setting: Rotate Mode, saturation, brightness,contrast, sharpness adjustable through client softwareor web browser, Edge Analytics: Tripwire, Intrusion, Motion Detection</p> <p>8) Cyber Security: AES 256-bit Encryption, Configuration encryption, trusted execution, Digest, security logs, account lockout, syslog, video encryption, IP/MAC filtering, HTTPS, trusted upgrade, trusted boot.</p> <p>9) Onboard Storage: Camera should support built-in Micro SD/SDHC/SDXC Card slot upto 512 GB. It should be supplied with minimum 128GB memory Card.</p>	Ea.	Separate Specification Sheet Attached
	<p>10) Recording Management: Format SD, overwrite, storage management, video to NAS device,</p> <p>11) Alarm Trigger : Motion/tampering detection; audio detection; network disconnection detection; IP conflict detection; memory card state detection; memory space detection</p> <p>12)Network Protocol: SFTP, IPv6, IPv4, DNS,RTCP, NTP, RTP, HTTP, HTTPS, SNMP TCP/IP, PPPoE, NFS, UDP, ICMP, SSL, DHCP, SMTP, RTSPS, unicast</p> <p>13) System Capability: ONVIF,</p> <p>14) Ethernet: 1 RJ 45 10/100 Ethernet port</p> <p>15) Audio : It should support 1 x Built-In Mic and 1/1 Alarm In/ Out for External Mic. and Speakers as per site requirement.</p> <p>16) Power Input: The camera should support simultaneous dual power input—12 VDC (via power adapter) and PoE (802.3af)—to ensure continuous operation in the event of a failure in one power source.</p> <p>17) Power Requirement: 12VDC/24 VAC/PoE (802.3af)/ePoE</p> <p>18) Housing/ Enclosure:- IP67 weather proof, IK10, Metallic body</p> <p>19) Operating Condition:- Ambient Temperature:- (-)05°C to 50°C, humidity 95% (max) (non-condensing)</p> <p>20) IR life: 40000 hours or higher</p> <p>21) Video Bit rate: 32 KBPS - 8 MBPS or better</p> <p>22) Standards: BIS with ER, STQC Certified, CE, FCC and RoHS</p> <p>2MP @ 25/30fps@1080P (1920×1080) Outdoor Bullet Camera with 2.8/ 3.6mm fixed lens</p>		

NAME OF WORK :- Upgradation & Construction of multi outdoor sports facilities at Gandhidham District Sport Complex, Kutch.			
Separate Specification Sheet			
Sr. No.	Item of Work	Unit	Specification as per General Specification book aprooved by R&B Department for Building uploaded here with/Separate Sheet Attached
367	<p>Supplying Installation Testing and Commissioning of following Channel Network Video Recorder (NVR) with camera licenses to record for all channels having specifications and features etc as mentioned below :</p> <p>1) Network Video Recorder Embedded/ Installed OS (Linux) along with Camera Licenses to record per NVR and to provide a live view, storage and simultaneously Multi-channel playback of all IP camera or more and must be ONVIF with minimum support of 384 Mbps incoming Bandwidth.</p> <p>2) NVR should support video compressions : H.265 or better, H.264, MJPEG.</p> <p>3) Must support 1 channel RCA Input, 2 channel RCA Output for Two-way Talk with G.711U/A, G.711u, PCM, G726 audio compressions.4) Intelligent auto power on when power resumes after power outage.</p> <p>5) Storage: It should support minimum 8 SATA Slots with 20TB capacity/ Slot and RAID support of RAID 0/1/5/6/10.</p> <p>6) Connectivity Interface : 2 Nos. x 10/100/1000 Mbps Ethernet Ports, 1x RS485, 1x RS232, 1x eSATA Port</p> <p>7) Backup Interface : Its should have 4 Nosx USB port (2x USB3.0, 2xUSB2.0)</p> <p>8) Video Output Ports: 2x HDMI and 2 VGA</p> <p>9) Alarm Ports: It should have 16/8 Ch In/ Out ports to connect various type of external sensors and output devices like hooter/ Siren etc.</p> <p>10) Email & SMS Alert options: Option for SMS/ Email Alerts to minimum 5 designated mobile number for power failure, HDD failure, vandalism, tempring, network disconnection and panic</p> <p>11) Web & Mobile Application: Web, Mobile app (For i Phone, iPad, Android Phone) for alerts and viewing.</p> <p>12) Protocols: HTTP, HTTPS, TCP/IP, IPv4/IPv6, UDP, DHCP, DNS, SMTP, UPnP, IP Filter, PPPoE,FTP, DDNS, Alarm Server, IP Search, Multicast, Auto Registration, ONVIF (Profile T, Profile S, Profile G), CGI, SDK and OEM Cloud for remote monitoring without any public IP need.</p> <p>13) Standards: CE, FCC, RoHS, BIS Certified</p> <p>14) Power Supply : Should support AC100-240V, 50/60Hz Power supply</p> <p>15) Operating Condition : -5°C to 50°C, humidity 90% (max) (non-condensing)</p> <p>16) The VMS application shall support all the features & functionalities of the offered cameras.</p>	Ea.	Separate Specification Sheet Attached
	<p>22) When alarm recording is enabled and an event occurs, you can click the alarm icon on monitoring page to view the alert details. The snapshot function is supported on monitoring and playback page</p> <p>23) The Network Video Recorder (NVR) shall be configured to send email whenever a system message is created or an alarm event occurs. The email server shall be a valid SMTP server. Each recipient email address shall be configured to receive any combination of critical, warning, or informational messages or alarm notifications. When an alarm occurs, the email message includes the NVR name, time of alarm and a list of camera that is configured to record upon alarm</p> <p>24) It should have Web and GUI interface.</p> <p>25) Built-In Artificial Intelligence: NVR should have built-in AI :- 2 Channel face detection and recognition, - Minimum</p> <p>4 Channel perimeter protection, - Minimum 8 Channel Smart Motion Detection</p> <p>26) Face Recognition Database Capacity: It should support total Blacklist and Whitelist capacity of Minimum 20,000 Faces or more with Face Detection speed of 12 face images/sec and facility to add Name, gender, birthday, address, credential type, credential No., countries & regions and state to each face image.</p> <p>27) Face & Human Attributes Search: Search Pictures/ Video by Gender, age group, glasses, expressions, face mask, beard, Top color, top type, hat, bag, age, gender and umbrella.</p> <p>28) ANPR Capability: It should support ANPR Camera with License plate, plate color, vehicle body, vehicle model, vehicle logo, calling, seatbelt, vehicle registration location etc vehicle attributes.</p> <p>29) Alarm Notifications based on: Motion detection, video tampering, video loss, scene changing, PIR alarm, Camera external alarm, Face detection, face recognition, perimeter protection (intrusion and tripwire), ANPR, people counting, stereo analysis, crowd distribution, heat map, Disk Full, Storage Error, IP Conflict and abnormal behavior of fan, cybersecurity exception</p> <p>30) Alarm Notification should be linked with Recording, snapshots, Camera external alarm output, buzzer,logs, presets and email.</p>		
	<p>31) General AI Based Search: Search Pictures by channel, time, event type, target classification (Fall Detection, People Approach Detection, People No. Exception Detection, People Staying Detection, Violence Detection.</p> <p>32) Smart playback function: Should support smart search for the selected area in the video and smart playback to improve the playback efficiency</p> <p>33) VCA (Video Content Analytic): Should support multiple video contented analytics based on camera analytics</p> <p>34) Analytics by NVR: Perimeter protection and face recognition</p> <p>32 Channel Network Video Recorder (NVR) having display split :- Main screen: 1/4/8/9/16/25/36/64, 2nd screen: 1/4/8/9/16</p>		

NAME OF WORK :- Upgradation & Construction of multi outdoor sports facilities at Gandhidham District Sport Complex, Kutch.			
Separate Specification Sheet			
Sr. No.	Item of Work	Unit	Specification as per General Specification book approved by R&B Department for Building uploaded here with/Separate Sheet Attached
368	PTZ (Pan. Tilt and Zoom) IP IR Camera Supplying Installation Testing and Commissioning of PTZ (Pan,Tilt and Zoom) IP IR Camera having following specifications and features etc :- 1) IP IR PTZ Camera: Motorized PAN TILT ZOOM with IR 2) Image Sensor: 1/2.8" or better progressive Scan CMOS 3)Signal System: PAL/NTSC 4) Minimum Illumination: 0.008 Lux@ F1.6, AGC ON, 0 lux with IR, or better 5) Imaging: 1/1s to 1/30000s, Auto Gain Control , White Balance- Auto, Back Light Compensation, Image Rotation, Multi zone Privacy Masking (Upto 24 Area), HLC, Defog, Region Of Interest and EIS features. 6) On Screen Display: Camera should display Camera title, Date & Time in live & recorded video both. 7) Signal to Noise Ratio: > 50 dB 8) Event Notification: Through Relays, E-Mails or FTP 9) Day & Night: True Day & Night High Performance Mechanical IR cut filter with auto switch, IR SourceInbuilt IR LED's with effective distance. The Camera should have IR LED's and cover distance up to 300 meter or above 10) Auto Tracking: The camera should be equipped with Deep-learning-based auto tracking function using simultaneously all of the panning, tilting and zooming should be available. When a motion is detected in a registered monitoring area, the camera should track the motion (object) and capture it. 11) Pre/Post Event Buffering: The camera should support atleast of 5 seconds of pre & post event buffering. 12) Presets: 300 Presets 13) Video Compression (Minimum): H.265 or better, H.264, Audio:- G.711U/A, G.711Mu, G.726, AAC, G.723 14) Wide Dynamic Range: WDR (120dB or more), HLC & BLC	Ea.	Separate Specification Sheet Attached
	15) Digital Noise Reduction: DNR (2D+3D) On/Off 16) Image Setting: Rotate Mode, ROI ,EIS, Defog, saturation, brightness, contrast, sharpness adjustable through client software or web browser 17) Profile Management: User configuration import, export 18) Cyber Security: Configuration encryption, AES 256-bit Encryption, Digest, account lockout, video encryption, IP/MAC filtering, trusted boot, trusted upgrade, trusted execution 19) Onboard Storage: Camera should support built in Micro SD/SDHC/SDXC Card slot upto 512 GB . It should be supplied with minimum 128GB Memory 20) Recording Management: Format SD, overwrite, storage management, video to NAS device, remote archive access via FTP login 21) Edge based Video Analytics & Alarm Trigger: Motion/tampering detection; network disconnection detection; IP conflict detection; memory card state detection; memory space detection, Tripwire, Intrusion, Object Abandon/ Missing, SMD, Face Detection 22) Network Protocol: SFTP, IPv6, IPv4, DNS,NTP, HTTP, HTTPS, SNMP, TCP/IP, PPPoE, NFS, ICMP, DHCP, SMTP, RTSPS. 23) System Capability: ONVIF Profile S, G & T. CCTV Camera OEM should be fulltime member of ONVIF and quoted models should be listed on ONVIF official website (All the certifications & Credentials should be valid on the date of technical evaluation). 24) VMS: Camera shall support open source VMS 25) Connectivity: 1x LAN RJ-45 (10/100Base-T) 26) Audio Support: Audio Interface : The camera should have 1/1 Audio In/Out to connect External Mic and Speaker Audio Compression : PCM, G.711U/A, G.711MU, G.726, MPEG2-Layer2, G.722.1 27) Alarm In/Out : Alarm In/out- 7/2 Ch In/Out		
	28) Power Input: The camera should support simultaneous dual power input—DC/ AC (via power adapter) and PoE (802.3af)—to ensure continuous operation in the event of a failure in one power source. 29) Power Requirement: 24 VDC, 2.5 A (± 25%), PoE+ (802.3at) 30) Enclosure & Weather Proof Standard: IP67 weather proof and IK10, TVS 8000V lightning proof, surge protection, voltage transient protection 31) Operating Condition:- Ambient Temperature:- ()05°C to 50°C, humidity 95% (max) (non-condensing) 32) IR life: 40000 hours or higher 33) Video Bit rate: 32 KBPS - 8 MBPS or better 34) Standards: BIS with ER, STQC Certified, CE, FCC and RoHS 5MP IP IR motorized PTZ @25/30fps or better camera, Triple streaming , configurable on resolution:- Main stream: 5MP@25/30 fps Sub streams:1080p@25/30 fps, varifocal lens 3.95mm (±5mm) ~ 177.75mm (±5mm) or better with Automatic & manual Focus Adjustment provisions, 45x Optical zoom and 16x Digital zoom with angle of view H: 65.7°—1.9°V: 39.4°—1.1°D: 73.1°—2.1, PAN Travel: Pan: 0° ~ 360° endless, Manual Pan: 260° /s, Preset : 300° /s, Tilt Travel: Tilt: -20° ~ 90°, auto flip 180°, Manual Tilt: 120° /s, Preset : 200° /s		

NAME OF WORK :- Upgradation & Construction of multi outdoor sports facilities at Gandhidham District Sport Complex, Kutch.			
Separate Specification Sheet			
Sr. No.	Item of Work	Unit	Specification as per General Specification book approved by R&B Department for Building uploaded here with/Separate Sheet Attached
369	Supplying, Installation, Testing and Commissioning following capacity Surveillance grade Hard Disk with upto 256MB/s Transfer Rate, 256 MB Cache, 7200 RPM Disk Speed, 3.5 inch form factor, SATA Interface, BSMI, ICES-003/NNB-003, CE, FCC, KC, Maghreb, RCM, UKCA, VCCI, CB-Scheme, TUV, UL Certifications 10TB (Terabytes)	Ea.	Separate Specification Sheet Attached
370	Supplying, Installation, Testing and Commissioning of following size LED display (LED monitor) industrial grade with 3840x2160 resolution or better, USB playback, bluetooth and miracast connectivity, 4X HDMI 2.0, DP 1.2, HDR 10/10+, brightness: 500-nits or better, Video wall mode should be available, contrast ratio: 1200:1, OPS slot, viewing angle (H/V): 170°/ 170°, response time less than 12ms, Display control shall be on monitor screen and programmable with remote (remote shall be supplied with system), Key Board, Optical Mouse, etc. as required. 55 inch	Ea.	Separate Specification Sheet Attached
371	Supplying, Installation, Testing and Commissioning of 9U IP65 Outdoor Wall Mount 19" Network Rack Cabinet made of powder-coated CRCA sheet steel with gasket-sealed lockable door, adjustable rack rails, cable entry gland plate, mounting accessories and all required hardware complete as required.	Ea.	Separate Specification Sheet Attached
372	Providing & Erecting 6 core fibre optic SM 9/125um double sheath, CSTA, Unitube, Outdoor cable (per m)	Mtr.	Separate Specification Sheet Attached
373	Supplying, Installation, Testing and commissioning of following CAT6 Patch Cord should have ETL/UL verification program certificate for compliance with ANSI/TIA-568.2-D etc. complete as required Copper Patch Cords of length 1m (3ft)	Ea.	Separate Specification Sheet Attached
374	Supplying, installation, Testing and commissioning of following capacity 24 port Layer 2 indoor Network Switch having features and specifications etc. as mentioned here under: At least 24 X RJ-45 Gigabit Ethernet Ports and additional 2 X 10G Base -T with 4X SFP Ports with non-blocking architecture by having Switching capacity of min. 168Gbps and packet forwarding rate of 125Mpps or higher, 16K MAC table. Console Port, USB port, Stacking support of min. 8 units per stack. Internal dual AC Power supply, STP, RSTP, MSTP, BPDU Filter, BPDU Restriction, Min. 9K Jumbo Frame, LBD, IGMP Snooping V1/V2/V3, MLD Snooping V1/V2. IGMP /MLD Groups 1K or more, IPv4/IPv6 Loopback Interface, 16 L3 IP Interface, Ipv6 ND, VRRPv3, UDP Helper, ECMP. VLAN: 802.1Q, Port based, Q-in-Q, Multicast VLAN, Protocol VLAN, VLAN Trunking, DHCP Snooping, Server, server Screening. RADIUS, TACACS+ Authentication, QoS: 802.1P, 8 queues per port, QoS : WRR, Strict+WRR, WRED, 802.1p. ACL: MAC based, IPv4C IPv6,TCP/UDP Port number, time based ACL, TFTP Client, SNMP V1, v2c, v3, SNMP traps, RMON, DHCP server, relay, client, LLDP, LLDP-MED, OAM, Dying Gasp, 802.3ah, sflow, RIP, OSPF v2/v3, policy based route, SSL, SSH. 6 kV surge protection on all Gigabit Ethernet ports and on all GE RJ-45 access ports. Certifications: UL, CE, FCC, RoHS, MTCTE, OEM/Product must be on Trusted Telecom Portal of India etc. complete as required. 24 port PoE Layer 2 Network Switch with PoE Support of 370W or higher with each copper port supporting 802.3at PoE+ min.	Ea.	Separate Specification Sheet Attached
375	Supply, installation, testing & commissioning (SITC) of Network Multifunction Printer (Print/Scan/Copy) complete with all accessories, drivers, cables, software, and required configuration for office & project documentation use as per technical specifications and direction of Engineer-In-Charge.	Ea.	Separate Specification Sheet Attached
376	INTERNAL & EXTERNAL DRAINAGE : Providing, fixing, jointing, testing and commissioning of UPVC Pipe Type-B for Soil & Waste. confirming to IS 13592 cut to required lengths including all necessary fittings and specials such as as 45 or 90 deg. bends, Tee's, Y's, access pipe with rubber ring jointing. Fixing at wall / ceiling level supported by galvanized brackets & pvc coated clamps,vent cowl & hangers etc. For Soil & waste, Vent and Rain water pipe lines. 160 mm dia.	R.m.	Separate Specification Sheet Attached
377	INTERNAL & EXTERNAL DRAINAGE : Providing, fixing, jointing, testing and commissioning of UPVC Pipe Type-B for Soil & Waste. confirming to IS 13592 cut to required lengths including all necessary fittings and specials such as as 45 or 90 deg. bends, Tee's, Y's, access pipe with rubber ring jointing. Fixing at wall / ceiling level supported by galvanized brackets & pvc coated clamps,vent cowl & hangers etc. For Soil & waste, Vent and Rain water pipe lines. 110 mm dia.	R.m.	Separate Specification Sheet Attached
378	INTERNAL & EXTERNAL DRAINAGE : Providing, fixing, jointing, testing and commissioning of UPVC Pipe Type-B for Soil & Waste. confirming to IS 13592 cut to required lengths including all necessary fittings and specials such as as 45 or 90 deg. bends, Tee's, Y's, access pipe with rubber ring jointing. Fixing at wall / ceiling level supported by galvanized brackets & pvc coated clamps,vent cowl & hangers etc. For Soil & waste, Vent and Rain water pipe lines. 50 mm dia.	R.m.	Separate Specification Sheet Attached
379	INTERNAL & EXTERNAL DRAINAGE : Providing, fixing, jointing, testing and commissioning of UPVC Pipe Type-B for Soil & Waste. confirming to IS 13592 cut to required lengths including all necessary fittings and specials such as as 45 or 90 deg. bends, Tee's, Y's, access pipe with rubber ring jointing. Fixing at wall / ceiling level supported by galvanized brackets & pvc coated clamps,vent cowl & hangers etc. For Soil & waste, Vent and Rain water pipe lines. 40 mm dia.	R.m.	Separate Specification Sheet Attached

NAME OF WORK :- Upgradation & Construction of multi outdoor sports facilities at Gandhidham District Sport Complex, Kutch.			
Separate Specification Sheet			
Sr. No.	Item of Work	Unit	Specification as per General Specification book aprooved by R&B Department for Building uploaded here with/Separate Sheet Attached
380	Supply, installation, testing & commissioning of uPVC Single wall corrugated perforated/non-perforated pipes designed for use in under-drainage of surface and sub-surface land/farms, canal, highways, roads, sports fields, building foundation, construction sites, interceptor drainage, in fields/farms, intercepting canal seepage and under-drainage offline canals etc conforming to IS 9271 having moulded as well as fabricated fittings such as coupler, Tee, Cross, Single Y, double Y & Bend. Perforated pipes shall be wrapped with geotextile fabric and braiding shall be octagonal peripheral symmetric arrangements. 300 mm dia.	R.m.	Separate Specification Sheet Attached
381	Supply, installation, testing & commissioning of uPVC Single wall corrugated perforated/non-perforated pipes designed for use in under-drainage of surface and sub-surface land/farms, canal, highways, roads, sports fields, building foundation, construction sites, interceptor drainage, in fields/farms, intercepting canal seepage and under-drainage offline canals etc conforming to IS 9271 having moulded as well as fabricated fittings such as coupler, Tee, Cross, Single Y, double Y & Bend. Perforated pipes shall be wrapped with geotextile fabric and braiding shall be octagonal peripheral symmetric arrangements. 160 mm dia.	R.m.	Separate Specification Sheet Attached
382	Supply, installation, testing & commissioning of uPVC Single wall corrugated perforated/non-perforated pipes designed for use in under-drainage of surface and sub-surface land/farms, canal, highways, roads, sports fields, building foundation, construction sites, interceptor drainage, in fields/farms, intercepting canal seepage and under-drainage offline canals etc conforming to IS 9271 having moulded as well as fabricated fittings such as coupler, Tee, Cross, Single Y, double Y & Bend. Perforated pipes shall be wrapped with geotextile fabric and braiding shall be octagonal peripheral symmetric arrangements. 110 mm dia.	R.m.	Separate Specification Sheet Attached
383	Providing and fixing approved SWR quality, heavy duty, uPVC ' P' Trap without CP pressed steel grating, to wall, ceiling and floor, including cutting the walls and floors and making them good, testing, etc., complete having 110mm inlet and 75mm outlet. It shall have minimum water seal of 50mm Testing & installation as per drawing & specification.	Each	Separate Specification Sheet Attached
384	Providing and fixing stainless steel (SS304) Perforated grating 'of 18 gauge thick, with 'circular perforation including Cockroach trap 'of 'approved pattern over CI/PVC 'traps. The grating shall be of size 153mm x 153mm or circular of 100mm dia 'as directed) and shall 'be set in cement, sand mortar 1:3 etc. complete.	Each	Separate Specification Sheet Attached
385	Providing and fixing Height Riser of 110 x 75 x 50 size of approved make. Complete all as per specification and as directed by the Engineer in charge.	Each	Separate Specification Sheet Attached
386	Making Khurras 45x45cm with average minimum thickness of 50 mm. cement concrete 1:2:4 (1 cement:2 coarse sand :4 graded stone aggregate of 20mm nominal size) over P.V.C. sheet 1mx1mx400micron, finished with 12mm cement plaster 1:3 (1 cement: 3 coarse sand) and a QUOTE of neat cement rounding the edge sand making and finishing the outlet complete depth as per site requirement.	Each	Separate Specification Sheet Attached
387	Providing and fixing S.W. gully trap with C.I. grating brick masonry chamber and water tight C.I. cover with frame of 300mm x 300mm size (inside) with standard weight.(i) Square mouth traps.(B) 150mm x 100mm size P or R type	Each	Separate Specification Sheet Attached
388	Constructing Manhole with R.C.C. top slab in 1:2:4 mix (1cement :2-coarse sand : 4-graded stone aggregate 20mm nominal size) foundation concrete 1:3:6 mix (1-cement : 3- coarse sand :6-Brick bats 40 + 50mm size) inside plastering 15mm thick with Cement Mortar 1:3 (1Cement : 3-coarse sand) finished with a floating coat of neat cement and making channels in cement concrete 1:2:4 mix (1-Cement :2-Coarse sand :4-stone aggregate 20mm nominal size) finished smooth complete including curing and festing (i) Inside size 900mm x 1200mm and 1.5M. deep including C.I. cover with frame size 560mm diameter total weight of cover and frame to be not less than 128 kgs. (Wt. of cover 64 Kg. and Wt. of frame 64 Kg.)(A) With 230mm thick walls of brick msonry using brick having crushing strength not less than 35Kg. / Sq.cm. in Cement Mortar 1:5 (1-Cement: 5-Coarse sand) (2) B type depth 1.50 Metre for 150mm diameter sewer.	Each	Separate Specification Sheet Attached
389	Constructing brick masonry road gully chamber 1100mm x775mm including 500mm x 450mm (C.I. horizontal gratingwith frame and vertical grating complete.)	Each	Separate Specification Sheet Attached
390	Providing laying (to level or slopes) and jointing reinforced concrete Light duty non-pressure pipes I.S., class NP2 of the following internal diameter with collars and butt ends prepared for collar joints including testing, of joints complete. 150 mm dia.	R.m.	Separate Specification Sheet Attached
391	Providing laying (to level or slopes) and jointing reinforced concrete Light duty non-pressure pipes I.S., class NP2 of the following internal diameter with collars and butt ends prepared for collar joints including testing, of joints complete. 250 mm dia.	R.m.	Separate Specification Sheet Attached
392	Providing laying (to level or slopes) and jointing reinforced concrete Light duty non-pressure pipes I.S., class NP2 of the following internal diameter with collars and butt ends prepared for collar joints including testing, of joints complete. 300 mm dia.	R.m.	Separate Specification Sheet Attached
393	Constructing masonry Soak well with mesonery work bottom side 6" PCC work, with minimum 9" thik brick wall with 30% opening in wall area, with Top side 6" RCC Slab, 400x400 Inspection chamber, top side with FRP cover fitting, 110mm Air vent line. Dia 3.0 Meter x 6 meter Depth	Set	Separate Specification Sheet Attached

NAME OF WORK :- Upgradation & Construction of multi outdoor sports facilities at Gandhidham District Sport Complex, Kutch.			
Separate Specification Sheet			
Sr. No.	Item of Work	Unit	Specification as per General Specification book aprooved by R&B Department for Building uploaded here with/Separate Sheet Attached
394	DRAIN CHANNEL Providing, supplying, lowering and laying including loading, unloading, installing with reffering of relevant activity wise specifications reffering to Local Auhtority,R&B & CPWD manuals etc. completed for precast U Shape Box Drain with perforated lid cover for various size and types of storm water drain as specified in detail drawings confirming to Japanese Industrial Standards, ASTM & meeting/satisfying relavent IS-code requirements, made by using advanced precast technology having High Performance Self Compacting Concrete of M-40 cylinder strength or M-50 Cube strength, Steam cured and using Fe 500D reinforcement bar. It shall have tie shape groove of 10-20 mm width X 25 mm depth as per mfg. spacs on both sides of each precast unit product for jointing two precast units & designed to take load carrying capacity - 4.8 Tonnes wheel load on it side wall with test result. It allows for flange coupling jointing arrangements, one each at bottom & both the side walls, at appropriate location for shear connection between two products. It sahl allow provision of drainage & other connection holes shall be made in the product for avoiding buoyancy and releasing the pressure of the surrounding water. It shall have proper provisions at appropriate location for mechanical installation, including supply, transportation, loading, unloading at project site. Manufacturer shall produce guareenty for 7 years. Precast products shall be of Fuji or Equivalent as approved by authority.	R.m.	Separate Specification Sheet Attached
	It allows for workmanship like manner for all kinds of skill to read and integrate design & drawing inconjunction with other infrastructure work and execute the same with man power, material and equipments, tools and kits, surveying machineries for alignment, excavation in grading, watering with layer wise back filling, compacting, installing in true line, level and in plumb, fixing and jointing, cross connections specials, tapping arrangement, watertightning, rubber ring, poy-sulphide selent, expansive grout, micro levelling with adjacent surface,PCC, etc. complete in neat and clean manner at all level till the level of satisfaction EIC. Contactor shall not charge extra in any case to complete the job. At least one moke-up shall be part of this job for approval before commissioning work. Material inspection at factory shall be part of contractor scope with 2-persons appointed by authority. Complete job as directed by Engineer in charge. Size : 300 x 300 mm		Separate Specification Sheet Attached
395	DRAIN CHANNEL Providing, supplying, lowering and laying including loading, unloading, installing with reffering of relevant activity wise specifications reffering to Local Auhtority,R&B & CPWD manuals etc. completed for precast U Shape Box Drain with perforated lid cover for various size and types of storm water drain as specified in detail drawings confirming to Japanese Industrial Standards, ASTM & meeting/satisfying relavent IS-code requirements, made by using advanced precast technology having High Performance Self Compacting Concrete of M-40 cylinder strength or M-50 Cube strength, Steam cured and using Fe 500D reinforcement bar. It shall have tie shape groove of 10-20 mm width X 25 mm depth as per mfg. spacs on both sides of each precast unit product for jointing two precast units & designed to take load carrying capacity - 4.8 Tonnes wheel load on it side wall with test result. It allows for flange coupling jointing arrangements, one each at bottom & both the side walls, at appropriate location for shear connection between two products. It sahl allow provision of drainage & other connection holes shall be made in the product for avoiding buoyancy and releasing the pressure of the surrounding water. It shall have proper provisions at appropriate location for mechanical installation, including supply, transportation, loading, unloading at project site. Manufacturer shall produce guareenty for 7 years. Precast products shall be of Fuji or Equivalent as approved by authority.	R.m.	Separate Specification Sheet Attached
	It allows for workmanship like manner for all kinds of skill to read and integrate design & drawing inconjunction with other infrastructure work and execute the same with man power, material and equipments, tools and kits, surveying machineries for alignment, excavation in grading, watering with layer wise back filling, compacting, installing in true line, level and in plumb, fixing and jointing, cross connections specials, tapping arrangement, watertightning, rubber ring, poy-sulphide selent, expansive grout, micro levelling with adjacent surface,PCC, etc. complete in neat and clean manner at all level till the level of satisfaction EIC. Contactor shall not charge extra in any case to complete the job. At least one moke-up shall be part of this job for approval before commissioning work. Material inspection at factory shall be part of contractor scope with 2-persons appointed by authority. Complete job as directed by Engineer in charge. Size : 450 x 450 mm		Separate Specification Sheet Attached
396	Providing and fixing, in proper line and level (with necessary support like, brick masonry pedestals and battens, if necessary) to floor, approved quality, heavy duty, White UPVC-Schedule 40 Grade as per ASTM D-1785, of Astral or equivalent, Open & Conceal piping, complete, including jointing with rubbering and airtight joints, with necessary specials, couplers, elbow, equal tees, tail piece, adapter (both male and female), reducer (single stage, double stage and triple stage), end cap, fabricated bend, etc., and lubricant or jointing material, including testing, cutting, making good the wall, ceiling and floor etc. Testing & installation of pipe lines as per drawing & specification. Internal work - Exposed on wall / Burried (Irrigation and Toilet Supply) 32 mm	RMT	Separate Specification Sheet Attached
397	Providing and fixing, in proper line and level (with necessary support like, brick masonry pedestals and battens, if necessary) to floor, approved quality, heavy duty, White UPVC-Schedule 40 Grade as per ASTM D-1785, of Astral or equivalent, Open & Conceal piping, complete, including jointing with rubbering and airtight joints, with necessary specials, couplers, elbow, equal tees, tail piece, adapter (both male and female), reducer (single stage, double stage and triple stage), end cap, fabricated bend, etc., and lubricant or jointing material, including testing, cutting, making good the wall, ceiling and floor etc. Testing & installation of pipe lines as per drawing & specification. Internal work - Exposed on wall / Burried (Irrigation and Toilet Supply) 40 mm	RMT	Separate Specification Sheet Attached

NAME OF WORK :- Upgradation & Construction of multi outdoor sports facilities at Gandhidham District Sport Complex, Kutch.			
Separate Specification Sheet			
Sr. No.	Item of Work	Unit	Specification as per General Specification book aprooved by R&B Department for Building uploaded here with/Separate Sheet Attached
398	Providing and fixing, in proper line and level (with necessary support like, brick masonry pedestals and battens, if necessary) to floor, approved quality, heavy duty, White UPVC-Schedule 40 Grade as per ASTM D-1785, of Astral or equivalent, Open & Conceal piping, complete, including jointing with rubbering and airtight joints, with necessary specials, couplers, elbow, equal tees, tail piece, adapter (both male and female), reducer (single stage, double stage and triple stage), end cap, fabricated bend, etc., and lubricant or jointing material, including testing, cutting, making good the wall, ceiling and floor etc. Testing & installation of pipe lines as per drawing & specification. Internal work - Exposed on wall / Burried (Irrigation and Toilet Supply) 65 mm	RMT	Separate Specification Sheet Attached
399	Providing and fixing, in proper line and level (with necessary support like, brick masonry pedestals and battens, if necessary) to floor, approved quality, heavy duty, White UPVC-Schedule 40 Grade as per ASTM D-1785, of Astral or equivalent, Open & Conceal piping, complete, including jointing with rubbering and airtight joints, with necessary specials, couplers, elbow, equal tees, tail piece, adapter (both male and female), reducer (single stage, double stage and triple stage), end cap, fabricated bend, etc., and lubricant or jointing material, including testing, cutting, making good the wall, ceiling and floor etc. Testing & installation of pipe lines as per drawing & specification. Internal work - Exposed on wall / Burried (Irrigation and Toilet Supply) 80 mm	RMT	Separate Specification Sheet Attached
400	Providing and fixing concealed center point to wall ceiling & floor CPVC (SDR 13.5) PIPE having National Sanitation Foundation (NSF) seal for potable water of following dia. nominal bore tube fittings and clamps including making good the wall, ceiling and floor etc. complete Concealed work, including cutting chases and making good the walls etc. 20 mm	RMT	Separate Specification Sheet Attached
401	Providing and fixing concealed center point to wall ceiling & floor CPVC (SDR 13.5) PIPE having National Sanitation Foundation (NSF) seal for potable water of following dia. nominal bore tube fittings and clamps including making good the wall, ceiling and floor etc. complete Concealed work, including cutting chases and making good the walls etc. 25 mm	RMT	Separate Specification Sheet Attached
402	Providing and fixing concealed center point to wall ceiling & floor CPVC (SDR 13.5) PIPE having National Sanitation Foundation (NSF) seal for potable water of following dia. nominal bore tube fittings and clamps including making good the wall, ceiling and floor etc. complete Concealed work, including cutting chases and making good the walls etc. 32 mm	RMT	Separate Specification Sheet Attached
403	Providing and fixing concealed center point to wall ceiling & floor CPVC (SDR 13.5) PIPE having National Sanitation Foundation (NSF) seal for potable water of following dia. nominal bore tube fittings and clamps including making good the wall, ceiling and floor etc. complete Concealed work, including cutting chases and making good the walls etc. 40 mm	RMT	Separate Specification Sheet Attached
404	Providing and fixing concealed center point to wall ceiling & floor CPVC (SDR 13.5) PIPE having National Sanitation Foundation (NSF) seal for potable water of following dia. nominal bore tube fittings and clamps including making good the wall, ceiling and floor etc. complete Concealed work, including cutting chases and making good the walls etc. 50 mm	RMT	Separate Specification Sheet Attached
405	Providing and fixing of gunmetal, male or female threaded isolation control valve (Ball Valve / Gate Valve) , confirming to latest IS PN 25 with necessary specials, union, nipples etc., to complete the job. 50 mm	NOS.	Separate Specification Sheet Attached
406	Providing and fixing of gunmetal, male or female threaded isolation control valve (Ball Valve / Gate Valve) , confirming to latest IS PN 25 with necessary specials, union, nipples etc., to complete the job. 65 mm	NOS.	Separate Specification Sheet Attached
407	Providing following size Cast Iron / Spiroidal Iron Singal Air valve of PN 1.6 of approved quality and make conforming to IS:14845 with ISI mark & Copper/Brass isolation Gate valve of PN as per air valve of approved quality and make conforming to IS:778/IS:13114, Tapers and specials etc. including making necessary screwed / flanged joints by providing all jointing materials testing the joints and valves hydraulically to a pressure & duration as specified along with the pipeline all as per the specifications and as directed by the E.I.C. 25 mm size	NOS.	Separate Specification Sheet Attached
408	Supply, installation, testing and commissioning of 20mm diameter Garden Hydrant with gun metal Ball Valve, Flexible hose Connection Provision and all required accessories etc.	NOS.	Separate Specification Sheet Attached
409	Supply, Installation, testing and commissioning of Rotationally moulded HDPE storage tank with ISI Mark of approved make incl. all taxes trasportation octroi etc. complete. Storage Tanks With ISI Mark (with outside Black colour & inside lining).complete as per direction of engineer in charge. Capacity : 2000 Liters	NOS.	Separate Specification Sheet Attached
410	Supply, Installation, testing and commissioning of Rotationally moulded HDPE storage tank with ISI Mark of approved make incl. all taxes trasportation octroi etc. complete. Storage Tanks With ISI Mark (with outside Black colour & inside lining).complete as per direction of engineer in charge. Capacity : 500 Liters	NOS.	Separate Specification Sheet Attached
411	DOMESTIC WATER TREATMENT PLANT Supply installation, testing and commissioning of dometic water treatment plant comprising of Pressure sand filter, and softner Plant accorrding to input water quality/analysis. Water treatment plant consisting of FRP tank, filter media, resins, brine tank, CPVC SCH 80 piping, isolation valves, instruments supports. The scope shall include CPVC SCH 80 interconnection piping, Butterfly Cast Iron valves, NRV, instruments, autoback wash arrangement, Brine preparation tank & agitator platform, 1 nos Agitator require capacity and Ventury etc.complete the job .Scope shall also includes one month operation including consumable and training for operation of staff. Inlet Flow Range : 1 m3/hour. Input Water Parameters: - As per Site Output Water Hardness : < 50 PPM	SET	Separate Specification Sheet Attached

NAME OF WORK :- Upgradation & Construction of multi outdoor sports facilities at Gandhidham District Sport Complex, Kutch.			
Separate Specification Sheet			
Sr. No.	Item of Work	Unit	Specification as per General Specification book aprooved by R&B Department for Building uploaded here with/Separate Sheet Attached
412	<p>WTP FEED PUMP Centrifugal Monoblock Transfer pump Supplying, installing, testing and commissioning of centrifugal pumps Complete with SS-316 casing, S.S 316 impeller and SS-316 shaft, C.I. Base CED (Cathode Electrode Deposition) coating & head TEFC motor (with mechanical seal) driven by 415 V AC, 3 phase, 50HZ., motor running at 2900 rpm speed , dry run protection, antivibration paid, 2 pole Motor & IE3 Efficiency, shall be supplied with all accessories viz., base plate, coupling, motor etc. complete. Contractor to submit performance curves and technical catalogue of the proposed model for review and information. Panel mounted microprocessor based multi pump controller with large graphical display with VGA 240 x 320 pixels and IP 55 enclosure, diodes to indicate pump ready, earthing, pump running and fault condition, Cascade Operation. Each incomer and Outgoing feeder should be capable for protection against Overload, Short Circuit and Phase reversal condition and shall be capable to communicate with other controllers following. The PLC shall support MODBUS-IP communication for its compatability to intergrate with 3rd party BAS system. Controller shall authorise Read/Write command via BMS.All alarms should be displayed in the controller. System should be equipped with dry running protection. Indication of all type of faults / on-off status / electrical parameters shall be available on panel and central IBMS monitors. On-off operation for all pumps shall be available on BMS system. SITC of electronic type low water level controler with LED panel to operate pump (necessary contacts along with minium one PLC operated spare contacts required), shall prevent the pump from dry running</p>	SET	Separate Specification Sheet Attached
	<p>Mounting Height : 500mm from the bottom of Raw Water tank. Electronic type low, Medium & High water level controller with LED panel to operate pump (necessary contacts along with minimum one PLC operated spare contacts required),level controller with operational mode as one pump working at Medium level and cut off at High level complete the job. Mounting Height (Medium Level) : (Domestic Treated water Tank) Mounting Height (Hight Level) : (Domestic Treated water Tank) with probe & all control wiring from Pump room Panel to operate the system automatic/manual & shall prevent the pump from dry running. Scope shall also include power and control cable of required size, termination, cable tray from Pump to Control panel, control cable as whereever required etc. complete the job. Set of accessories such as GI C Class headers of suction and discharge for (working and Standby pump assembly) with CED Coating, Gun Metal Isolation valves, Gun Metal non return valves, pressure gauge with Isolation Valve of PN 10 etc. complete the job. Capacity per pump - 1.0 m3/hour, Head - 30 mt, 1 Set = 2 Nos. Pump (1 Working + 1 Standby - cascade operation).</p>		
413	<p>HYDRO PNEUMATIC SYSTEM FOR Domestic Water Distribution, Variable Speed Hydro-booster System Compact self contained Hydro-booster system comprising of following SITC of In-line, vertical multistage, centrifugal clear water pumps with SS-304 casing, S.S 304 impeller and SS-304 shaft, C.I. Base CED (Cathode Electrode Deposition) coating & head TEFC motor (with mechanical seal), dry run protection, antivibration paid, 2 pole Motor & IE3 Efficiency. Vendor to submit performance curves and technical catalogue of the proposed model for review and information. Panel mounted microprocessor based multi pump controller with large graphical display with VGA 240 x 320 pixels and variable frequency drive (VFD) integrated in a single body, pressure sensor transmitter, IP 55 enclosure, diodes to indicate pump ready, earthing, pump running and fault condition, Cascade Operation. Each incomer and Outgoing feeder should be capable for protection against Overload, Short Circuit and Phase reversal condition and shall be capable to communicate with other controllers following. The PLC shall support MODBUS-IP communication for its compatability to intergrate with 3rd party BAS system. Controller shall authorise Read/Write command via BMS.System should be capable to compensate for frictional losses at lower flows. All alarms should be displayed in the controller. System should be equipped with dry running protection. Indication of all type of faults / on-off status / electrical parameters shall be available on panel and central IBMS monitors. On-off operation for all pumps shall be available on BMS system.</p>	SET	Separate Specification Sheet Attached
	<p>Electronic type low water level controller with LED panel to operate pump (necessary contacts along with minimum one PLC operated spare contacts required), with probe & all control wiring from Panel to tank to operate the system automatic/manual & shall prevent the pump from dry running. Scope shall also include power and control cable of required size, termination, cable tray from Pump to Control panel, control cable as whereever required etc. complete the job. Pre-charged diaphragm pressure vessel with interchangeable membrane, charging connection, connected to outlet header with necessary flanges, gaskets, isolating valves, nuts/bolts etc. complete (size of pressure vessel shall be as per manufacturer recommendation). Set of accessories such as GI C Class headers of suction and discharge for (working and Standby pump assembly) with CED Coating, Cast iron control valves, Cast Iron non return valves, pressure transducers, pressure gauge with Isolation Valve of PN 10 etc. complete the job.Require complete company fitted ready-to-connect packaged system. Capacity per pump - 1 m3/hour, Head - 35 mt, 1 Set = 2 Nos. Pump (1 Working + 1 Standby - cascade operation). Location - UGT Pump Room</p>		

NAME OF WORK :- Upgradation & Construction of multi outdoor sports facilities at Gandhidham District Sport Complex, Kutch.			
Separate Specification Sheet			
Sr. No.	Item of Work	Unit	Specification as per General Specification book aprooved by R&B Department for Building uploaded here with/Separate Sheet Attached
414	<p>Sump Drain Pump Supply, installation, testing & commissioning of Submersible Non Clog, single stage, single entry pumps connected to TEFC submersible motor for 415 + 10% volts, 3 phase, 50 cycles A.C. power supply with mechanical seal, pump connector unit with rubber diaphragm and bend, vertical discharge pipe. The pump shall be provided with a lifting devise of pull chain/guide rail. (Pumps suitable to handle solids upto 20 mm size with C.I. body, SS304 shaft, SS impeller). Panel mounted microprocessor based multi pump controller with large graphical display with VGA 240 x 320 pixels and IP 55 enclosure, diodes to indicate pump ready, earthing, pump running and fault condition, Cascade Operation. Each incomer and Outgoing feeder should be capable for protection against Overload, Short Circuit and Phase reversal condition and shall be capable to communicate with other controllers following. The PLC shall support MODBUS-IP communication for its compatability to intergrate with 3rd party BAS system. Controller shall authorise Read/Write command via BMS.All alarms should be displayed in the controller. System should be equipped with dry running protection. Indication of all type of faults / on-off status / electrical parameters shall be available on panel and central IBMS monitors. On-off operation for all pumps shall be available on BMS system.Scope shall also include supply, laying, termination of control and power cables of adequate size and arrangemnt of cable trayfrom pump to control panel etc. to complete the job.</p>	SET	Separate Specification Sheet Attached
	<p>Electronic type low, Medium & High water level controller with LED panel to operate pump (necessary contacts along with minimum one PLC operated spare contacts required),level controller with operational mode as one pump working at Medium level, both pumps at High level with a hooter alarm and cut off at Low level complete the job. Mounting Height (Low Level): (Sump) Mounting Height (Medium Level) : (Sump) Mounting Height (Hight Level): (Sump) with probe & all control wiring from Pump room Panel to Sump to operate the system automatic/manual & shall prevent the pump from dry running. Scope shall also include power and control cable of required size, termination, cable tray from Pump to Control panel, control cable as whereever required etc. complete the job. Set of accessories such as CPVC SCH 80 headers of discharge for (working and Standby pump assembly) , Gun Metal Isolation valves, Gun Metal non return valves, pressure gauge with Isolation Valve of PN 10 etc. complete the job. Capacity per pump - 5.0 m3/hour, Head -35 mt, 1 Set = 2 Nos. Pump (1 Working + 1 Standby - cascade operation).</p>		