

OFFICE OF THE ENGINEER-IN-CHIEF
P.W.D. NIRMAN BHAVAN, NORTH BLOCK, SECTOR-19
NAWA RAIPUR, ATAL NAGAR (CHHATTISGARH)

SPECIALIZED SOR ITEM CORRIGENDUM ORDER - 2

No. 65011/804/SOR/

Nawa Raipur, Atal Nagar Dated 16/10/2026

The following corrigendum are hereby issued in the items mentioned below in Specialized S.O.R. item for Building Works (in effect from 10-08-2026)

Chapter/ Name/ S.No.	Printed as	Read as
Sports / 1	Supplying laying and commissioning 7 mm thick Seamless point-elastic indoor sports floor. The system consists of a high resilient granular base mat with polyurethane self-leveling elastic wear layer covered by a wear resistant mat top coat finish. The PU-Sport© system (i) Elastic Layer 5 mm thick rubber MA with the following specifications of volumetric weight 750 - 775 gm/m², tensile strength 0.60N/mm² 2 mm thick PU includes (ii) 1 Layer two component polyurethane pore sealer (iii) 2nd Layer of two component polyurethane self-leveling wear coat that ensures exceptional durability. (iv) 3rd Layer two component aliphatic polyurethane topcoat with very high abrasion resistance, as well as stain resistant. (v) Line Marking as per requirement of the games. complete as per direction of Engineer-in-Charge.	Providing, supplying, laying, testing and commissioning of approximately 7 mm thick seamless point-elastic polyurethane (PU) indoor sports flooring system, suitable for multi-purpose indoor sports courts and comprising resilient rubber mat, polyurethane wear layers and protective topcoat. The completed system shall comply with the applicable requirements of EN 14904:2006 for indoor multi-sports surfaces, including requirements for shock absorption, vertical deformation, surface friction, ball behaviour and surface evenness, with applicable test methods referenced therein. The flooring system shall comprise the following minimum build-up: I. Elastic Base Layer: Approximately 5 mm thick prefabricated granular rubber mat, manufactured from resilient rubber granules bonded with polyurethane binder, having volumetric weight approximately 750-775 g/m² and tensile strength ≥ 0.60 N/mm², securely bonded to the prepared substrate using compatible two-component polyurethane adhesive. II. PU Pore Sealer: One coat of two-component polyurethane pore sealer applied uniformly over the rubber mat to seal the surface and provide suitable adhesion for the subsequent PU layers. III. Self-Leveling PU Wear Layer: Approximately 2 mm thick two-component, elastic, pigmented polyurethane self-leveling layer, providing a uniform, resilient and durable sports surface. IV. PU Protective Topcoat: Two-component aliphatic polyurethane topcoat having high abrasion, stain and chemical resistance, with a suitable slip-resistant/matt finish for indoor sports use. V. Sports Line Marking: Compatible two-component polyurethane sports marking paint, applied accurately for the respective sports as indicated in the approved drawings, without adversely affecting the performance of the finished floor. The completed flooring shall be seamless, resilient, uniform, abrasion-resistant, slip-resistant and suitable for intensive indoor sports use, with no visible cracks, blisters, pinholes, delamination, ridges or other surface defects. The system shall provide the required sports performance and durability throughout its service life. The substrate shall be clean, dry, sound, level and suitably prepared before application. Material mixing, application, curing and environmental conditions shall be maintained in accordance with the approved system requirements. The flooring system and installation shall comply with EN 14904:2006 and applicable referenced test methods, including EN 13036-4 for surface friction, as applicable. For detailed material properties, layer thickness, density, tensile strength, PU consumption, substrate preparation, application procedure, curing period, sports-performance criteria, testing, maintenance and warranty requirements, kindly refer to the Detailed Technical Specifications and approved Detailed Design Drawings. Complete including rubber mat, PU adhesive, pore sealer, self-leveling PU layer, protective PU topcoat, sports line markings, substrate preparation, laying, curing, testing, protection, labour, tools, equipment and all necessary accessories, complete as directed by the Engineer-in-Charge.

Sports / 2	Supply and installation of high-quality 100% synthetic rubber, free from harmful plasticizers or PVC, 75mm high 3mm thick flexible rubber skirting (cove base) for use with rubber gym flooring. Materials must be compliant with LEED indoor air quality standards (low VOC). Fixed using manufacturer-approved rubber adhesive or contact cement, ensuring full surface bonding to wall and floor interface. Skirting shall be manufactured from durable, non-marking, smooth matte or textured, anti-slip finish resilient, rubber compound, designed to protect walls from impacts, scuffing, and cleaning equipment, while ensuring a clean, hygienic finish between floor and wall junctions. Installation shall comply with ASTM F1861 – Standard Specification for Resilient Wall Base.	Providing, supplying and installing 75 mm high × 3 mm thick flexible rubber skirting/cove base, manufactured from 100% synthetic rubber compound, free from PVC and harmful plasticizers, suitable for use with resilient rubber gym/sports flooring. The skirting shall be durable, resilient, non-marking and resistant to impact, abrasion, moisture and routine cleaning chemicals, with a smooth/matt or approved textured finish. The skirting shall provide a continuous and hygienic transition at the floor-wall junction and protect the wall surface from impact, scuffing, cleaning equipment and routine sports-facility use. The material shall have low VOC emissions and be suitable for indoor applications. Installation shall be carried out using manufacturer-approved rubber adhesive/contact adhesive, with full and uniform bonding to the wall and floor interface. Joints, internal/external corners and terminations shall be neatly cut, tightly fitted and securely bonded without visible gaps, lifting or distortion. The skirting shall comply with the applicable requirements of ASTM F1861, Standard Specification for Resilient Wall Base, including applicable requirements for dimensions, physical properties and performance. For detailed material composition, physical properties, VOC/indoor-air-quality requirements, colour, adhesive type, substrate preparation, installation procedure, jointing and maintenance requirements, kindly refer to the Detailed Technical Specifications and approved Detailed Design Drawings. Complete including rubber skirting/cove base, adhesive, cutting, corner treatment, jointing, fixing, surface preparation, labour, tools and all necessary accessories, complete as directed by the Engineer-in-Charge.
Sports / 4	Supplying and laying of 300mm dia. double wall corrugated - SN8 (IS:16098-II) pipes in under ground system as per detailed design drawing for provision in electrical line and sprinkler lines sleeve purposes and drainage outlet complete in all respect as per direction of engineer in charge. Excavation for trench, dressing and refilling should paid extra.	Providing, supplying and laying 300 mm nominal internal diameter (DN/ID) double-wall corrugated (DWC) structured-wall pipe, SN8 stiffness class, suitable for underground non-pressure drainage, electrical/sprinkler line sleeves, drainage outlets and other underground utility crossings, conforming to IS 16098 (Part 2), Structured-Wall Plastics Piping Systems for Non-Pressure Drainage and Sewerage – Pipes and Fittings with Non-Smooth External Surface, Type B, with latest amendments. The pipe shall be manufactured from suitable virgin PE/PP material complying with the material requirements of IS 16098 (Part 2), with a smooth inner wall and uniformly corrugated outer wall, free from cracks, blisters, delamination, voids and other manufacturing defects. The pipe shall have a minimum internal diameter of 300 mm, with dimensions and tolerances conforming to IS 16098 (Part 2); for 300 mm ID, the standard minimum internal diameter is approximately 294 mm, with minimum wall thicknesses $e_4 = 2.0$ mm and $e_5 = 1.7$ mm, as applicable to the standard dimensional designation. The pipe shall have nominal ring stiffness SN8, i.e. ≥ 8 kN/m², suitable for underground installation and capable of resisting external soil and traffic loading when installed with the specified bedding and backfill. The pipe shall satisfy applicable requirements for impact resistance, ring flexibility, ring stiffness, dimensional accuracy, resistance to heating/thermal stability and joint watertightness in accordance with IS 16098 (Part 2). Joints shall be made using integral socket/coupler with elastomeric sealing ring, or other jointing arrangement approved for the specified pipe system, ensuring leak-resistant and secure connections. For pipe sizes above 200 mm, jointing shall be carried out using suitable mechanical/jacking equipment where required to prevent damage to the socket and sealing ring. The pipe shall be laid to the line, level, invert, sleeve location and gradient shown in the approved Detailed Design Drawings, with suitable granular bedding, side support, haunching and backfilling. For use as electrical/sprinkler sleeves, the pipe shall be positioned and aligned to provide the required clear internal passage and shall be provided with end caps/sealing arrangements wherever indicated. Drainage outlet connections shall be made using compatible fittings and connectors as detailed in the approved drawings. The pipe shall comply with applicable testing requirements of IS 16098 (Part 2), including dimensional verification, visual examination, resistance to heating, ring stiffness, impact resistance, ring flexibility and joint tightness, as applicable. Relevant BIS/ISI certification and batch/lot test certificates shall be submitted before installation.

		For detailed dimensions, material characteristics, stiffness classification, test requirements, jointing arrangement, bedding, installation and backfilling requirements, kindly refer to the Detailed Technical Specifications and approved Detailed Design Drawings. Excavation, trench dressing and refilling/backfilling shall be measured and paid separately, unless specifically included under the respective BOQ item. Complete including 300 mm ID SN8 DWC pipe, sockets/couplers, elastomeric sealing rings, jointing, cutting, alignment, laying, supports/bedding interface, end caps, compatible fittings and all necessary accessories, complete as per approved Detailed Design Drawings, Technical Specifications and directions of the Engineer-in-Charge.
Sports / 5	Providing and laying World Athletics Approved Synthetic Athletics Track PUR SYSTEM which should comply with Environmental compatibility of VOC (Volatile Organic Compound) content as per DIN-V-18035-6. including "WA" Standard markings on the surface all complete as per requirements/ specifications laid down by "WA" class -II certification and as per direction of the Engineer-in-charge. The synthetic Track should conform to the following specifications: Tensile strength 0.5N/mm² 0.3N/mm² Elongation at break >40% Force reduction 35–50% Vertical deformation 0.6–2.5mm Standard deformation 0.6–1.8mm (at0–40°C) Thickness >14mm Relative abrasion >1.0 Friction(sliding coefficient) >0.5 <1.1 Spike resistance Class I Remaining indentation<1.0mm Environmental requirements Limit values for DOC, EOX, Heavy metals, smell, with applying UV protective PU spray coat of WA approved product Manufacture for required colour over top layer as complete as per direction of Engineer-in-Charge. The proposed product should be certified by World Athletic (Earlier IAAF)for Class II Track complete as per direction of Engineer-in-Charge. Product to be only of European, American, Australian or Indian Origin	Providing, supplying, laying, testing and commissioning of World Athletics (WA) Class II certified polyurethane (PUR) type synthetic athletics track and field surface system, comprising suitable primer, resilient polyurethane/rubber shock-absorbing layers, polyurethane binder with graded rubber granules, intermediate structural/wearing layers, pigmented polyurethane surface coating and compatible protective finish, laid over a properly prepared bituminous or equivalent base, including complete surface preparation, primer application, mixing and laying of polyurethane and rubber components, levelling, compaction, spray/structural coating, curing and finishing, complete with standard lane markings, start/finish lines, relay markings, hurdle markings and field-event markings as applicable, strictly in accordance with the applicable World Athletics Track and Field Facilities Manual, World Athletics Class II certification requirements and approved drawings. The complete system shall be a seamless, resilient, UV-resistant, weather-resistant, non-slip and spike-resistant athletics surface suitable for track and field events and shall comply with the applicable requirements of World Athletics, EN 14877 and DIN 18035-6, including applicable environmental requirements for VOC emissions, odour and restricted substances. The completed system shall achieve the performance requirements applicable to the certified system, including tensile strength $\geq 0.5 \text{ N/mm}^2$, elongation at break $\geq 40\%$, force reduction 35–50%, vertical deformation 0.6–2.5 mm, standard deformation 0.6–1.8 mm, coefficient of friction 0.5–1.1, required spike resistance and residual indentation $\leq 1.0 \text{ mm}$, together with applicable abrasion, weathering and durability requirements. The exact system offered shall possess a valid World Athletics Class II Product Certificate, with the applicable system construction and thickness as specified under the respective sub-items. The contractor shall submit the manufacturer's Technical Data Sheet (TDS), valid World Athletics Class II Product Certificate, EN 14877/DIN 18035-6 test certificates, independent laboratory test reports, environmental/VOC compliance documentation, complete system build-up, installation methodology, material details, warranty and maintenance requirements for approval prior to procurement. The item shall include all materials, specialist labour, transportation, surface preparation, primer, polyurethane components, rubber granules, binder, structural and wearing coats, protective finish, lane and event markings, jointing, curing, testing, protection, tools and plants, wastage, accessories and all incidental works necessary to provide a complete and operational World Athletics Class II synthetic athletics track system, including coordination and documentation required for certification, complete as directed by the Engineer-in-Charge.
Sports / 5.1	Synthetic Athletics Track 15mm thick PUR SYSTEM	Minimum 15 mm thick for standard track areas
Sports / 5.2	High Stress Areas with a minimum thickness of 20 mm PUR SYSTEM	Minimum 20 mm thick for High-stress areas including starting zones, hurdle take-off/landing zones, relay exchange zones and areas subjected to concentrated athlete loading
Sports / 5.3	High Stress Areas with a minimum thickness of 25 mm PUR SYSTEM	Minimum 25 mm thick for High-impact/high-stress areas including long jump/triple jump take-off and landing zones, pole vault take-off/landing zones and other designated high-impact areas as indicated in the approved layout.

Sports / 6	Supplying and filling of fine silica sand in jumping pits of depth 300mm to 500mm having grain size 0.25 to 1.00mm (optimal 0.40-0.80 mm) density of 1500-1600 kg/Cum, rounded or sub rounded (no sharp angular grains) kiln dried , light beige / off white colour including cost and conveyance of all materials and labour charges to the site to fill the sand in pits and complete finished item as per World Athletics (IAAF) rule 184 geometry & safety Guidance..	Providing, supplying and filling of approved fine silica sand in long jump/triple jump landing pits to a compacted depth varying from 300 mm to 500 mm, conforming to World Athletics Rule 184; sand to be clean, washed and kiln-dried silica with particle size distribution 0.25–1.00 mm (preferred 0.40–0.80 mm), bulk density 1500–1600 kg/m³, rounded/sub-rounded grains free from sharp angular particles, silt, clay and organic impurities, and of light beige/off-white colour; including transportation, handling, spreading in layers, leveling, raking and dressing to maintain a loose, uniform and safe landing surface flush with pit edges, with all labour, tools, incidentals and complete finishing as per approved drawings and directions of Engineer-in-Charge, complete in all respects.
Sports / 7	Supply and Installation track field equipment material for conducting various event. (approved by World Athletics) complete finished item as per drawing and as directed by Engineer-in-Charge.	Providing, supplying, installing and commissioning of track and field equipment for various athletics events, conforming to World Athletics approved standards, including all materials, fixtures, fittings, anchoring systems, testing and commissioning, complete in accordance with approved drawings, manufacturer's specifications and directions of the Engineer-in-Charge, complete in all respects.
Sports / 7.1	Supplying and installation of pole vault take-off box including all accessories, complete with a removable weather-resistant cover. The box shall be constructed of hot-dip galvanized steel, with internal dimensions and slope angles fully compliant with World Athletics. Internal Dimensions: Length: 1.00 m ±10 mm Rear Width (top opening): 60 cm ±20 mm Front Width (throat): 15 cm ±10 mm Depth: 20 cm ±10 mm Slope Angle: Approx. 120° Material: Heavy-duty galvanized steel or stainless steel. Finish: Rust-proof with non-slip internal surface. The box shall be set flush with the runway surface, embedded in a reinforced concrete pit, with provisions for adequate drainage. The cover shall be: Made of UV-resistant fiberglass, aluminum, or galvanized steel Lockable/securable and designed to sit flush with the surrounding surface. Non-slip textured surface and weather-resistant for outdoor use. All components shall be suitable for international-level pole vault competitions, and certified or certifiable by World Athletics (where applicable). Installation shall be carried out by experienced personnel ensuring full integration with existing track and field infrastructure complete finished item as per drawing and as directed by Engineer-in-Charge. 	Providing, supplying, installing, testing and commissioning of Pole Vault take-off box with removable cover, conforming to the current requirements of World Athletics (WA) and suitable for international-level competition use, fabricated from heavy-duty SS 304 stainless steel or hot-dip galvanized steel of minimum 3 mm thickness, with corrosion-resistant/rust-proof finish, accurately formed, folded and welded, complete with reinforcement ribs/projections for secure anchoring within the reinforced concrete encasement, non-slip internal surface and suitable drainage openings to prevent water accumulation. The take-off box shall have internal dimensions and geometry conforming to the applicable World Athletics requirements, comprising approximately 1.00 m length, 600 mm rear/top opening width, 150 mm front/throat width and 200 mm depth, with dimensional tolerances as permitted by World Athletics, and shall incorporate the required slope geometry, including approximately 120° outward side-wall angle. The box shall be designed for accurate flush installation with the finished athletics runway surface and shall be securely embedded and anchored within a properly constructed reinforced concrete chamber, with adequate drainage provision connected to the approved drainage system. The take-off box shall be provided with a removable, weather-resistant cover fabricated from minimum 3 mm thick SS 304 stainless steel, aluminium, hot-dip galvanized steel or other approved UV-resistant durable material, complete with suitable underside reinforcement and positive locking/securing arrangement to prevent movement during use; the cover shall be capable of receiving the synthetic track surface on its upper face and shall be installed flush with the surrounding finished surface, with a durable non-slip textured finish and without creating any trip hazard. All stainless-steel material shall be supported by Material Test Certificate/Mill Test Certificate confirming material grade, chemical composition, mechanical properties and heat/batch traceability; fabricated welded joints shall be free from cracks, porosity and other defects and shall be visually inspected and subjected to dye-penetrant testing where directed by the Engineer-in-Charge. All components shall be durable, dimensionally stable, corrosion-resistant, UV-resistant and compatible with the proposed synthetic athletics track system. The complete assembly shall be World Athletics certified or certifiable for compliance with the current World Athletics Technical Rules, and the contractor shall submit the exact product/model certification, Technical Data Sheet, dimensional drawings, material certificates, test reports and installation details for approval before procurement. The complete pole vault box and cover shall carry a minimum 5-year warranty against manufacturing defects, material defects, corrosion, weld failure, deformation and failure of fixing/anchoring components. The item shall include reinforced concrete chamber/interface, drainage arrangement, box, cover, anchoring and fixing accessories, alignment, levelling, installation, jointing, integration with the synthetic runway, finishing, testing, protection, labour, tools and plants and all incidental works necessary for a complete and competition-ready installation, complete as directed by the Engineer-in-Charge and in accordance with World Athletics requirements. 

Sports / 7.2	Supplying and installing Long Jump and Triple Jump Take-off Board with housing tray and plasticine insert, complete as per World Athletics specifications as follows :- Take off board- 3 No per pit side, total No:12 Nos Material: Laminated wood or synthetic board Finish: Durable, weather-resistant coating (typically white) Dimensions: Length: 1.22 m $\pm$ 0.01 m, Width: 0.20 m $\pm$ 0.01 m, Thickness: ~0.1 m, Mounting: Must be flush with runway surface; removable for maintenance complete finished item as per drawing and as directed by Engineer-in-Charge.	Providing, supplying, installing, testing and commissioning of World Athletics (WA) certified Long Jump/Triple Jump take-off board assembly, suitable for international-level competition, comprising take-off board, supporting frame, removable plasticine indicator board/insert and corrosion-resistant foundation tray, complete with levelling, fixing, locking and anchoring arrangements. The take-off board shall be manufactured from high-quality solid laminated/seasoned wood or approved synthetic composite material, finished in white colour with durable weather-resistant, non-slip surface and accurately machined to maintain dimensional stability. The complete assembly shall conform to applicable World Athletics Technical Rules and Track & Field Facilities requirements, with take-off board nominal length approximately 1.22 m, and all critical dimensions, tolerances and installation clearances as per current WA requirements. Supporting frame shall be fabricated from minimum 3 mm thick corrosion-resistant stainless steel or approved equivalent, suitably formed/folded and reinforced, with adjustable levelling studs/feet and positive locking arrangement to prevent movement during use. Foundation tray shall be fabricated from corrosion-resistant stainless steel or equivalent, suitable for permanent flush installation within the runway and compatible with synthetic athletics track construction, including provision for drainage, anchoring and adjustment. Complete assembly shall include a plasticine indicator board/insert of approximately 100 mm width with replaceable plasticine strips, suitable for accurate foul detection, together with all required fixing hardware, anchoring components, levelling and alignment accessories. The take-off board and tray shall be removable for inspection, maintenance and replacement while maintaining accurate positioning, stability, level continuity and a trip-free transition with the synthetic runway surface. The exact proposed product/system shall have valid World Athletics certification/approval for the model and configuration offered, and the Contractor shall submit the original WA certificate, manufacturer's Technical Data Sheet, certified dimensional drawings, material certificates, stainless-steel grade and thickness details, plasticine indicator details, fixing/levelling arrangement, drainage details, installation methodology and warranty for approval prior to procurement. Complete including foundation tray, take-off board, plasticine indicator assembly, supporting frame, anchoring, levelling, alignment, drainage, fixing accessories, installation and seamless integration with synthetic runway, all as specified and complete in all respects.
Sports / 7.3	Supplying and installation a combined hammer and discus throw facility including: Galvanized steel throwing ring, Protective cage structure with netting. The system must comply with the latest World Athletics Technical Rules TR33 (Throwing Circle) and TR34 (Cage Dimensions) and be suitable for international-standard competitions. Throwing Ring Specification: Material: Galvanized or stainless steel, Internal Diameter: 2.135 m $\pm$ 5 mm, Height Above Slab: 20 mm, Finish: Anti-slip treated, corrosion-resistant, Installation: Fixed in flush concrete base, properly aligned and leveled Cage Height: 10 m (main posts), 7 m (side posts in gate section), Cage Width (Opening at Front): 6 m ($\pm$ tolerance), gate angles adjustable, Total Depth (Back to Front): ~7-10 m depending on configuration ,Material (Posts): Hot-dip galvanized steel or powder-coated steel pipes, Netting :- High-tensile nylon or polypropylene mesh, UV-resistant, weatherproof, min. mesh size 44 mm, Minimum certified breaking strength: 250 kg per strand, Net Support: Steel cables or tensioned guy wires, Post Foundations: all posts with embedded sleeves/anchors ,Safety Feature: Opening/closing gate mechanism for discus/hammer transitions complete finished item as per drawing and as directed by Engineer-in-Charge.	Combined hammer and discus throw facility shall conform to World Athletics Technical Rules TR33 (Throwing Circle) and TR34 (Cage Requirements) and shall be suitable for international-level competitions. The facility shall comprise a throwing ring, protective cage structure with netting, and all associated components designed for safety, durability and performance. The throwing ring shall be fabricated from hot-dip galvanized steel or stainless steel with anti-slip, corrosion-resistant finish, having internal diameter 2.135 m ($\pm$5 mm) and projecting 20 mm above the finished concrete slab, with accurate alignment and level integration within the concrete surround. The protective cage shall consist of hot-dip galvanized or powder-coated steel tubular posts with minimum height of 10 m (main posts) and 7 m (gate/side posts), front opening width approximately 6 m ($\pm$ tolerance) and overall depth of about 7-10 m, with adjustable gate angles to suit both hammer and discus events. Netting shall be high-tensile UV-stabilized nylon or polypropylene mesh with maximum mesh size 44 mm and minimum breaking strength of 250 kg per strand, supported on galvanized steel cables/guy wires with proper tensioning arrangement to maintain shape and energy absorption. All posts shall be securely fixed in reinforced concrete foundations with embedded sleeves/anchors ensuring rigidity and stability. The system shall include an operational gate mechanism for event transition, and all components shall be weather-resistant, corrosion-proof and suitable for heavy-duty outdoor use, ensuring safe containment of implements and full compliance with World Athletics requirements, complete in all respects.

Sports / 7.4	Supplying and installation discuss throwing cage with socket 4.3 to 6.3 m Height (New IAAF Rule from 2020) Made by Aluminium The 7 uprights for this safety cage are made from aluminium Profiles (Ø120 x 100 mm, wall thickness 2.5 mm) Included safety net (made in Europe) and pull up devices1 and 2 post in front is 6.3 m height as per drawing and as directed by Engineer-in-Charge.	Providing, supplying, installing, testing and commissioning of World Athletics Certified Discus Throwing Cage, complete with aluminium uprights, safety netting, tensioning/raising arrangement, ground sockets, bracing members, fixing hardware and accessories, conforming to the latest World Athletics Competition and Technical Rules, TR35 and suitable for international-level competition. Uprights: Extruded structural aluminium sections, minimum 120 × 100 mm, minimum 4 mm wall thickness, corrosion-resistant outdoor finish. Structural supports: Aluminium/approved corrosion-resistant steel bracing, brackets, ground sockets, anchorages and fixing hardware. Cage opening: Minimum 6.00 m clear mouth/opening, positioned approximately 7.00 m in front of the centre of the throwing circle, as per approved layout and World Athletics requirements. Netting: High-tenacity, UV-stabilized, weather-resistant synthetic fibre net; maximum mesh size 45 mm for fibre-cord netting. Net height: Minimum 4.00 m, with minimum 6.00 m height for the 3.00 m portions nearest the front of the cage on each side, or as required by the applicable World Athletics certified configuration. Net support: Continuous top/side support with UV-resistant ropes/cables, pulleys, hooks, clamps and tensioning devices. Safety: Suitable for containment of a 2 kg discus at velocities up to 25 m/s, without passage through, underneath or over the cage. Foundations: Reinforced concrete foundations with galvanized /stainless-steel sockets, anchors and fixing arrangements as per approved structural/foundation drawings. Metal protection: Corrosion-resistant finish; isolation of dissimilar metals to prevent galvanic corrosion. Certification: Valid World Athletics Certified Competition Equipment certificate for the proposed cage configuration. Submittals: World Athletics certificate, manufacturer's TDS, dimensional drawings, material/section details, net specification, structural/wind-load data, foundation requirements, installation method, maintenance instructions and warranty. Installation: Complete alignment, levelling, anchoring, net tensioning, testing and commissioning as per approved drawings and certified equipment configuration. Complete with all materials, labour, transportation, equipment, fittings, foundations/anchoring accessories, installation and incidental works, as directed by the Engineer-in-Charge
Sports / 7.5	Supplying and installing Shot Put Throwing Ring with toe board, complete with galvanized steel circle, in-situ reinforced concrete base, and removable toe board; as per World Athletics Technical Rule having specification Hot-dip galvanized or stainless steel ring, Material: Painted hardwood, resin composite, or high-grade polymer. Dimensions (as per World Athletics TR32): Height: 100 mm ± 2 mm, Chord Length: 1.21 m ± 2 mm, Thickness: 114 mm front face curvature, install with removable or bolted to concrete base, Smooth painted white, durable and weather-resistant complete finished item as per drawing and as directed by Engineer-in-Charge.	Shot Put Throwing Ring with toe board, comprising galvanized steel/stainless-steel throwing ring, reinforced concrete base and removable toe board, conforming to the latest World Athletics Technical Rules, TR32, suitable for competition use. Throwing ring: Hot-dip galvanized steel or stainless steel, corrosion-resistant, rigid and accurately circular. Internal diameter: 2.135 m ± 0.005 m. Ring projection: Approximately 20 mm above the surrounding surface, with smooth, level transition. Toe board: White, durable and weather-resistant, fabricated from painted hardwood, resin composite or high-grade polymer. Toe board height: 100 mm ± 2 mm. Toe board chord length: 1.21 m ± 0.02 m. Toe board position: Accurately positioned against the inner front edge of the throwing circle and securely fixed/removable as per approved design. Surface finish: Smooth, non-abrasive, white, UV and weather-resistant. Base: Reinforced concrete throwing circle/base, accurately levelled and integrated with the surrounding field surface. Fixing: Removable/bolted arrangement with corrosion-resistant anchors and fixing hardware. Certification: Suitable for World Athletics competition requirements, with manufacturer's TDS and dimensional/material compliance documentation. Installation: Accurate setting-out, alignment, levelling and integration with the surrounding athletics surface as per approved drawings. Complete with throwing ring, toe board, concrete base, fixing hardware, finishing, installation and all necessary accessories, complete as directed by the Engineer-in-Charge.

Sports / 7.6	Supplying and installing prefabricated aluminum kerbing for the inside lane of synthetic athletics track, including ground anchoring system and curve connectors; complete as per World Athletics specification as follows, Material: High-strength extruded aluminum alloy, Finish: Mill finish or powder-coated white (weatherproof, UV-resistant), Height Above Track Surface: 50 mm $\pm$ 5 mm, Width (base): Approx. 60–80 mm, Length of individual sections: 4.0 m or 5.0 m (factory-standard lengths), Shape: Rounded or chamfered top edge to reduce injury risk, Drainage: Optional cutouts or holes for surface runoff installing in Galvanized or stainless steel ground anchors at 500–1000 mm centers, Base Plates: Prefixed holes in kerb base for mechanical anchoring, Flexible Joints: Expansion and contraction gaps between segments, Connector Brackets: Stainless steel or aluminum interlocking brackets between sections, End Sections: Tapered kerb ends at start/finish or steeplechase zone complete finished item as per drawing and as directed by Engineer-in-Charge.	Aluminium internal kerbing for the inside edge of synthetic athletics track, complete with ground anchoring system, base plates, connectors, joints, end sections and all necessary accessories, conforming to the latest World Athletics Technical Rules and Track & Field Facilities Manual, complete as follows: Material: High-strength extruded aluminium alloy conforming to EN 755-1 for technical conditions of inspection and delivery, EN 755-2 for mechanical properties and EN 573-3 for chemical composition. Aluminium grade: Suitable structural extrusion alloy and temper for outdoor application; manufacturer's material certificate confirming alloy, temper, chemical composition and mechanical properties. Kerb height: 50–65 mm above track surface, conforming to World Athletics requirements. Kerb width: 50–250 mm, conforming to World Athletics requirements. Proposed section: Approximately 50 mm height $\times$ 60–80 mm base width, unless otherwise required by the approved certified system. Profile: Extruded aluminium, rounded/chamfered top edge, smooth and free from sharp projections. Finish: Mill finish or durable white powder-coated finish, UV-, weather and corrosion-resistant. Powder coating: Where provided, coating system suitable for exterior aluminium applications and conforming to applicable EN 12206-1 requirements. Section length: Standard factory lengths, approximately 4.0–5.0 m, with accurately fabricated joints. Anchoring: Galvanized steel or stainless-steel ground anchors at approximately 500–1000 mm c/c, with spacing adjusted to suit the approved kerb system and track radius. Base fixing: Factory-provided fixing holes/base plates with corrosion-resistant mechanical anchors. Connectors: Aluminium or stainless-steel interlocking brackets providing continuous alignment between adjoining sections. Joints: Controlled expansion/contraction gaps and suitable joint connectors to accommodate thermal movement. Drainage: Suitable drainage openings/cut-outs wherever required to prevent water accumulation behind or beneath the kerb. End sections: Tapered/transition sections at start/finish, steeplechase diversion and other locations where the kerb terminates or is temporarily removed. Track interface: Continuous, accurately aligned inner edge with smooth transition to the synthetic track surface; inner edge to remain horizontal within applicable World Athletics tolerances. Temporary removal: Provision for removal/reinstallation of kerb sections where required for field-event access, steeplechase diversion or maintenance. Testing/documentation: Aluminium mill certificate, alloy/temper certificate, dimensional inspection report and coating certificate, where applicable. Installation: Setting out, curved alignment, levelling, anchoring, jointing and integration with the track system strictly as per approved detailed drawings and World Athletics requirements. Complete with aluminium kerbing, anchors, base plates, connectors, expansion joints, transition/end sections, fixing hardware, installation and all necessary accessories, complete as directed by the Engineer-in-Charge.
Sports / 7.7	Supplying and installation Water jump hurdle/barriers, made of Heavy duty foldable beam made of square pipe covered with thick waterproof solid plywood. Base legs & base are made of steel square pipe with spring loaded snap lock system for easy adjustment of three different required heights i.e. 762 mm, 838 mm and 914mm. Legs are fitted into sockets grouted in the ground. Painted with premium quality polyurethane paint for longer life & durability, easy to install & foldable for easy transportation all complete item as per drawing and as directed by Engineer-in-Charge.	World Athletics compliant steeplechase water-jump hurdle/barrier, including heavy-duty hurdle beam, steel supporting frame, adjustable legs, ground sockets, locking arrangement, protective finish and all necessary fittings, conforming to World Athletics Technical Rule TR23 and applicable Track & Field Facilities Manual requirements, complete as follows: Hurdle width: 3.66 m $\pm$ 0.02 m. Hurdle height: 914 $\pm$ 3 mm, fixed height suitable for Senior Men's steeplechase competition, conforming to the latest World Athletics Technical Rules, TR23. Top bar: Minimum 127 $\times$ 127 mm $\pm$ 3 mm square section. Top bar material: Hardwood or other suitable high-strength material, weather-resistant and impact-resistant. Top bar finish: Contrasting white/black or approved high-visibility colour bands, with lighter bands minimum 225 mm wide. Structure: Heavy-duty steel/aluminium supporting frame with adequate rigidity and corrosion protection.

		Base/fixing: Hurdle firmly fixed to/in the concrete walls of the water pit, permitting minimum horizontal movement, as required by TR23. Adjustability: Height-adjustable arrangement with secure locking mechanism for applicable competition categories. Protective finish: Hot-dip galvanized, powder-coated or equivalent corrosion-resistant treatment suitable for wet outdoor conditions. Fasteners: Corrosion-resistant galvanized/stainless-steel bolts, nuts, anchors and fixing accessories. Water-pit integration: Hurdle installation coordinated with the water-jump pit dimensions, levels and synthetic landing surface. Certification/documentation: Manufacturer's TDS, dimensional drawings, material details and compliance documentation with World Athletics TR23. Installation: Accurate alignment, levelling, fixing and integration with the water-jump pit as per approved detailed drawings and World Athletics requirements. Complete with hurdle/barrier, supporting frame, adjustable legs, sockets, anchors, locking system, protective coating, fixing hardware, installation and all necessary accessories, complete as directed by the Engineer-in-Charge.
Sports / 7.8	Supplying and installation of reducer circle ring designed to fit concentrically inside the standard throwing circle to aid training and technique development for hammer and discus athletes made in hot-dip galvanized steel or stainless steel Anti-corrosion coating, smooth edges, rust-resistant of size Minimum 5 mm thickness, removable or fixed to the concrete slab using flush mounting bolts or embedded anchors complete finished item as per drawing and as directed by Engineer-in-Charge.	Removable reducer circle ring for hammer/discus training use, designed to fit concentrically within the standard throwing circle, complete with fixing arrangement and accessories, as follows: Material: Hot-dip galvanized structural steel conforming to EN 10025-2, minimum grade S275JR, with galvanizing conforming to ISO 1461:2022, or stainless-steel conforming to EN 10088-2, grade AISI 304/EN 1.4301 or superior; Minimum thickness: 5 mm. Internal diameter: As per approved training configuration and detailed drawings, maintaining concentric alignment with the standard throwing circle. Profile: Smooth, continuous circular profile with rounded edges and no sharp projections. Finish: Hot-dip galvanized or equivalent anti-corrosion finish; stainless steel where specified. Fixing: Removable flush-mounted fixing using countersunk bolts/anchors, or approved embedded-anchor arrangement. Surface: Flush with the surrounding throwing-circle surface to avoid trip hazards and interference with athlete movement. Compatibility: Suitable for hammer and discus throwing training and compatible with the standard World Athletics throwing-circle arrangement. Material documentation: Manufacturer's material certificate confirming steel grade/thickness and corrosion-protection treatment. Installation: Accurate concentric positioning, levelling and fixing as per approved detailed drawings. Complete with reducer ring, anchors/bolts, fixing accessories, corrosion protection, installation and all necessary fittings, complete as directed by the Engineer-in-Charge.
Sports / 8	Supplying and installation of FIFA approved Football Portable Goal Post of International Regulation size 24x8ft. Uprights & Cross bar of 100mm M.S. round tube and back support of 50 mm M.S. round tube Uprights, Cross bar & back supports finished in PU scratch resistant paint. Lightweight but rigid construction for stability and portability with net having high-tenacity polyethylene (PE) or nylon, UV stabilized and weatherproof with minimum tensile strength of 250 N per strand fixed using Net hooks, clips, or cord lacing system integrated along posts and crossbar, portable with flip over wheels complete finished item as per drawing and as directed by Engineer-in-Charge.	Portable Football Goal Posts: Providing, supplying, installing, testing and commissioning of portable full-size football goal post system, FIFA compliant/certified, suitable for international-level competition, complete with goal frame, rear support frame, net, net fixing system, integrated transport/flip-over wheels, stabilizing arrangement, anchoring/ground-fixing system and all necessary accessories. The goal shall have an internal opening of 7.32 m width × 2.44 m height, with dimensions and tolerances complying with the applicable IFAB Laws of the Game and FIFA Football Goal Testing requirements; the goalposts and crossbar shall be of uniform section, white finished, and shall not present sharp edges or other player hazards. The goal frame shall comprise two vertical uprights and one horizontal crossbar fabricated from minimum 100 mm nominal diameter MS circular tubes or an approved structurally equivalent section, with rear support members fabricated from minimum 50 mm nominal diameter MS circular tubes, suitably designed and braced to provide structural rigidity and stability during play and movement. All steel members shall be continuously welded/accurately fabricated, free from distortion and sharp projections, suitably prepared and protected against corrosion by hot-dip galvanizing or an approved multi-coat anti-corrosion treatment, followed by durable PU/polyurethane-based UV- and scratch-resistant white finish.

		The portable goal shall incorporate a properly engineered integrated wheel/transport system, preferably flip-over type, with heavy-duty wheels positioned to permit safe movement without damaging the playing surface; wheels shall be lockable or otherwise arranged so that they do not interfere with stability during play. The complete goal shall be provided with a positive anti-tip/stabilization and anchoring system, including ground anchors, ballast or equivalent approved stabilizing arrangement, designed so that the goal cannot overturn during normal football use. The goal net shall be manufactured from high-tenacity UV-stabilized polyethylene/polypropylene/nylon or equivalent outdoor-grade fibre, weather-resistant and rot-resistant, with mesh configuration suitable for full-size football, and shall be securely connected to the goal frame and rear support system using purpose-designed net hooks, clips, lacing cord or equivalent fixing devices having no sharp or hazardous projections. Net material and fixing shall be tested in accordance with applicable requirements, including EN ISO 1806 for netting breaking force and EN ISO 2307 for fibre/rope mechanical properties, where applicable. The complete goal assembly shall comply with EN 748, Playing Field Equipment – Football Goals – Functional and Safety Requirements and Test Methods, including requirements relating to dimensions, structural integrity, stability, net fixing, safe construction, movement and ground fixing. EN 748 identifies 7.32 × 2.44 m as a standard full-size goal dimension and includes freestanding/portable goal configurations. The goal shall also comply with the applicable IFAB Laws of the Game, under which full-size goals are 7.32 m between the inside faces of the posts and 2.44 m from the lower edge of the crossbar to the ground, and portable goals are required to be firmly secured to the ground. The complete proposed goal assembly, including frame, net, net fixing, stabilizing/anchoring system and transport arrangement, shall be supported by a valid FIFA-recognized football goal test/certification or conformity documentation applicable to the exact model/configuration offered. FIFA's testing programme specifically evaluates full-size goals for dimensional compliance, net characteristics/fixings and resistance to toppling under applied loads. Contractor shall submit manufacturer's Technical Data Sheet, FIFA certification/test report or recognized conformity certificate, EN 748 compliance/test certificate, certified dimensional drawings, structural details, material certificates, steel grade and section details, corrosion-protection/coating details, net test certificate, net mesh and breaking-force data, wheel/transport details, anchoring/stabilization calculations or test results, installation/maintenance instructions and minimum 5-year manufacturer's warranty for approval prior to procurement. Complete including goal frames, rear supports, wheels, stabilizers, anchors/ballast, net, net fixing system, corrosion protection, PU finish, installation, alignment, testing for stability and functionality, commissioning and all accessories, as specified and complete in all respects.
Sports / 9	Design, Supply, Installation, Testing and Commissioning of Football FOP Irrigation/sprinkler System as per sprinkler as per detailed design layout, site conditions requirement, scope of work to make sprinkler system operate smoothly. Including all material & Labour charges, piping, pop up sprinkler with swing joints, all Cabling with conduit, Pumps (1 working + 1 standby) min. 7.5HP, Automatic Control Panel, Valves, Disc Filter, Clamps, NRV, Etc all complete to run Smooth Operation of Sprinkler.) complete as per direction of Engineer-in-Charge. Pop-up sprinkler having variable adjustable arc (50 to 360 degrees) nozzle capable of covering 15 to 21 mtr. The sprinkler shall have a minimum of 3-1/2-inch (9 cm) pop-up stroke to bring the rotating nozzle turret into a clean environment. The sprinkler shall be available as a 6-inch (15cm), double acting air vacuum release 2 " Air release valve with Pressure Gauge The Air release valve shall be capable of both releasing and admitting air from and into the line. The working pressure shall be 5 bar.	Providing, designing, supplying, installing, testing and commissioning of complete automatic irrigation/sprinkler system for Football Field of Play (FOP) of approximately 6,400 sqm (100 m × 64 m), based on detailed hydraulic calculations and the irrigation layout shown in the attached/approved drawing, including HDPE/uPVC pressure piping, pop-up rotary sprinklers, solenoid and control valves, filtration system, pump sets, electrical control panel, automatic irrigation controller, control cabling, valve boxes, fittings and all necessary accessories. The location, number and spacing of sprinklers, irrigation zones, pipe routing, pipe diameters, valve locations, pump/filter arrangement and other layout details shall be strictly as indicated in the attached detailed irrigation layout drawing, which shall form part of the specification. Sprinklers: Heavy-duty pop-up rotary/gear-driven sprinklers suitable for sports fields, with adjustable arc 50°–360°, throw radius 15–21 m, minimum 90 mm pop-up height and 150 mm pop-up models where required, complete with suitable nozzles, corrosion-resistant components, swing joints and integral check/filter arrangement. Sprinklers shall be selected to provide uniform head-to-head coverage and the required precipitation rate. Pipework and Valves: HDPE PE100 or uPVC pressure pipes, minimum PN10, with sizes and routing as shown in the attached detailed layout drawing.

	12" & 10" rectangular Valve Box with greenlid and corrugated structure with unique shovel access slot and bolt hole knockout AUTOMATIC BACKWASH FILTER - with capacity matching the Pump Design flow having a suitable inlet connections, to create helical effect in the incoming water. 7.5 HP Submersible Pump Set (1W+ 1S) suitable for pump set having panel box and fixed along with following accessories starter, start / stop push buttons, Ammeter, Voltmeter, Indicating lamps, MCB with cable, etc. Providing & Fixing of Suction, Delivery & Header Pipe. "Providing & fixing of control Valve/ Butterfly Valve In mainline for bypass and flow diversion of approved quality 3" Providing & fixing of Non-Return Valve to prevent back flow 3" "Providing and fixing of Direct burial 16 AWG x 1C cable for TWO way communication between Controller and valves" Providing and fixing of PVC conduit Pipe complete 32 mm. "Providing and fixing of Pro-C - Controller with Output Module Internal transformer control system, cycle +soak, Rain delay, SOLARSYNC controlling upto 1 master valve with diagnostic feature In wire shorttest, voltage test at stations, standard accessories Complete, Providing and fixing of 2" Solenoid globe, Providing and fixing of direct bury -on wire connector with strain relief 1 with waterproof silicon sealant." Providing and fixing of Voltage stabiliser Brands:- i) Pipe & Valve:-Harit/Prince/ Supreme, ii)HDPE Pipe:-Duraline/Times Technoplast/ supreme, iii)SPRINKLERS, AUTOMATION & ACCESSORIES :- Rain Bird, USA iv)FILTRATION UNIT:- Azud, Spain, v) Pumps:- Kirloskar/Crompton Greave /KSB /Willow etc complete as per direction of Engineer-in-Charge.	HDPE joints shall be by approved butt/electrofusion and uPVC joints by compatible solvent/ring jointing. Provide 2" 24 VAC normally-closed solenoid valves, 3" PN10 butterfly/control valves, 3" non-return valves, 2" double-acting air-release/vacuum-break valves and 0-10 bar pressure gauges, complete with isolation valves, unions, bends, tees, reducers, adaptors, swing joints and fittings. Buried valves shall be housed in heavy-duty rectangular valve boxes with UV-resistant green lids. Filtration: Automatic self-cleaning disc filtration unit, minimum PN10, sized for the design flow and suitable for sprinkler protection, with 100-130 micron filtration or finer where required, automatic differential-pressure/programmable backwash, pressure indication, backwash valves and drain connection. AZUD or equivalent approved system. Pump Set: 2 Nos. pump sets, 1 working + 1 standby, each minimum 7.5 HP, with final discharge and total dynamic head established by approved hydraulic calculations and compatible with the sprinkler layout shown in the attached drawing. Pumps shall be suitable for 415 V, 3-phase, 50 Hz, continuous operation, with minimum IE3 motor efficiency, IP55 enclosure and Class-F insulation, complete with suction/delivery piping, common headers, isolation valves, non-return valves, flexible connectors and automatic duty/standby changeover. Electrical and Automation: Complete control panel with MCCB/MCBs, contactors, overload, short-circuit, phase-failure/sequence and under/over-voltage protection, ammeter, voltmeter, indication lamps, start/stop controls and auto/manual selection. Programmable multi-station irrigation controller with master-valve control, independent zone operation, cycle-and-soak, rain delay, seasonal adjustment, manual operation and diagnostic functions. Provide minimum 16 AWG direct-burial control cable, waterproof connectors and 32 mm dia. PVC conduit under paved areas and wherever indicated in the attached drawing. Installation, Testing and Commissioning: All pipework, sprinklers, valves, pumps, filtration and control equipment shall be installed strictly in accordance with the attached detailed irrigation layout drawing and approved hydraulic design, including the indicated sprinkler locations, spacing, pipe routes, valve locations and irrigation zones. Pipework shall be laid on suitable compacted bedding and protected during backfilling. The complete system shall be pressure tested, flushed and hydraulically balanced, and each irrigation zone tested for sprinkler pressure, discharge, coverage, valve operation, pump duty, filtration/backwash and automatic control sequence. Any leakage, pressure deficiency, dry area or malfunction shall be rectified prior to commissioning. Submit hydraulic calculations, equipment TDS, material/test certificates, pump curve/selection, control schematic and final as-built drawings.
Sports / 10	Providing and laying of polypropylene fibers Geotextile separation barrier of 140 GSM as a separation and filtration layer in subsurface drainage systems beneath the outfield as per the standard procedure during construction, or as per Latest Guideline of ICC specification, Geotextile Type Non-woven needle-punched polypropylene complete as required etc.complete as per direction of Engineer-in-Charge. Mass per unit area $\geq 200\text{g/m}^2$ ASTM D5261 Grab tensile strength $\geq 8.0\text{kN/m}$ ASTM D4632 / EN ISO 10319 Elongation at break $\geq 50\%$ ASTM D4632 CBR puncture resistance $\geq 1.8\text{kN}$ ASTM D6241 Permeability (permittivity) $\geq 0.5\text{sec}^{-1}$ ASTM D4491 Apparent opening size (AOS) $\leq 0.212\text{ mm}$ (No. 70 sieve) ASTM D4751 UV resistance (500 hrs) $\geq 70\%$ retained strength ASTM D4355	Providing and laying non-woven needle-punched polypropylene geotextile separation and filtration layer, suitable for subsurface drainage system beneath the cricket outfield, laid over/around the specified drainage layers and granular materials as per approved detailed design drawings, construction methodology and applicable ICC guidelines/specifications, complete in all respects. Material: 100% polypropylene, non-woven, needle-punched geotextile. Mass per unit area: $\geq 200\text{ g/m}^2$, ASTM D5261. Grab tensile strength: $\geq 8.0\text{ kN/m}$, ASTM D4632 / EN ISO 10319. Elongation at break: $\geq 50\%$, ASTM D4632. CBR puncture resistance: $\geq 1.8\text{ kN}$, ASTM D6241. Permittivity: $\geq 0.5\text{ sec}^{-1}$, ASTM D4491. Apparent opening size (AOS): $\leq 0.212\text{ mm}$, ASTM D4751. UV resistance: $\geq 70\%$ retained strength after 500 hours, ASTM D4355. Functions: Separation, filtration, prevention of migration of fine soil particles and maintenance of drainage-layer integrity. Installation: Continuous and wrinkle-free, with overlaps, joints, cutting, fixing and anchoring as required by the approved drainage design. Compatibility: Suitable for contact with soil, aggregate, drainage pipes and other materials forming part of the subsurface drainage system. Quality documentation: Manufacturer's TDS, material test certificates and relevant test reports confirming compliance with the specified properties. Complete with geotextile, cutting, laying, overlapping, jointing, fixing, wastage, labour, tools and accessories, complete as per approved detailed drawings and direction of the Engineer-in-Charge.

Sports / 11	Supplying and laying ISI-marked, perforated high-density polyethylene (HDPE) pipe of 150 mm nominal diameter and pressure rating of 10 kg/cm², laid in prepared trenches on a compacted granular sub-base, at 4-meter center-to-center spacing, including necessary excavation, provision of end caps, jointing, and all related accessories, complete in all respects as per the drawings, specifications, and as directed by the Engineer-in-Charge	Providing, supplying, laying, testing and commissioning of ISI-marked High Density Polyethylene (HDPE) drainage/sewerage pipe of 150 mm nominal diameter and pressure rating of 10 kg/cm², manufactured from virgin PE100 grade polyethylene compound, suitable for underground gravity drainage, storm-water and sewerage applications, conforming to IS 14333:2022, "Polyethylene Pipes for Sewerage and Industrial Chemicals and Effluent – Specification", with latest amendments. The pipe shall be black, UV-stabilized and chemically resistant, with controlled density, melt flow rate, oxidation induction time, carbon black content and dispersion, and shall have uniform circularity, smooth internal surface, consistent wall thickness and be free from cracks, blisters, voids, delamination, scratches and other manufacturing defects. The nominal diameter, wall thickness and pressure/class designation shall conform to IS 14333:2022 and the specified 10 kg/cm² pressure rating, including applicable dimensional tolerances and performance requirements. The pipe shall satisfy applicable tests for density, melt flow rate, carbon black content and dispersion, oxidation induction time, longitudinal reversion, tensile strength, elongation and internal pressure/creep rupture performance as specified under the applicable standard. The pipeline shall be laid in prepared trenches over properly compacted granular bedding, with bedding, side support, surround and backfilling as shown in the approved detailed drainage design drawings. Laying shall maintain the specified line, level, invert and gradient without reverse slope, excessive deflection, kinking or deformation. Joints shall be formed by approved butt-fusion/electrofusion or other compatible jointing system using suitable fittings and calibrated equipment, with proper cleaning, alignment, fusion and cooling. All bends, tees, reducers, couplers, junctions, end caps, adaptors, manhole connectors and other fittings shall be compatible with the HDPE pipe system and suitable for drainage service. Connections to manholes, inspection chambers, catch pits and other drainage structures shall be executed using suitable flexible connectors, puddle flanges, adaptors or other approved arrangements as detailed in the drawings. The completed pipeline shall be inspected for line, level, gradient, joint integrity, obstruction and free flow, followed by applicable leakage/watertightness testing prior to backfilling and commissioning. Compliance shall be demonstrated through valid BIS/ISI certification and relevant material and performance test certificates confirming conformity with IS 14333:2022 and the specified pipe grade, dimensions and pressure rating. All materials, installation and workmanship shall comply with the applicable Indian Standards and approved detailed drainage design. Complete including 150 mm nominal diameter HDPE drainage pipe, 10 kg/cm² pressure rating, laying, cutting, alignment, levelling, jointing, bends, tees, reducers, couplers, chamber connections, fittings, testing and all necessary accessories, as per the detailed design drawings and specifications issued for the work, complete in all respects
Sports / 12	Supplying and laying ISI-marked, perforated high-density polyethylene (HDPE) pipe of 300 mm nominal diameter and pressure rating of 10 kg/cm², laid in prepared trenches on a compacted granular sub-base, at 4-meter center-to-center spacing, including necessary excavation, provision of end caps, jointing, and all related accessories, complete in all respects as per the drawings, specifications, and as directed by the Engineer-in-Charge	Providing, supplying, laying, testing and commissioning of ISI-marked High Density Polyethylene (HDPE) drainage/sewerage pipe of 300 mm nominal diameter and pressure rating of 10 kg/cm², manufactured from virgin PE100 grade polyethylene compound, suitable for underground gravity drainage, storm-water and sewerage applications, conforming to IS 14333:2022, "Polyethylene Pipes for Sewerage and Industrial Chemicals and Effluent – Specification", with latest amendments. The pipe shall be black, UV-stabilized and chemically resistant, with controlled density, melt flow rate, oxidation induction time, carbon black content and dispersion, uniform circularity, smooth internal surface, consistent wall thickness and free from cracks, blisters, voids, delamination, scratches and other manufacturing defects. The nominal diameter, wall thickness and pressure rating shall conform to the requirements of IS 14333:2022 and the specified 10 kg/cm² pressure rating. The pipe shall satisfy applicable tests for density, melt flow rate, carbon black content and dispersion, oxidation induction time, longitudinal reversion, tensile strength, elongation and internal pressure/creep rupture performance, as applicable to the specified grade and class. The pipeline shall be laid in prepared trenches over properly compacted granular bedding, with bedding, side support, surround and backfilling as shown in the approved detailed drainage design drawings. Laying shall maintain the specified line, level, invert and gradient without reverse slope, excessive deflection, kinking or deformation.

		Joints shall be formed by suitable butt-fusion/electrofusion or compatible jointing system using appropriate fittings and equipment, with proper cleaning, alignment, fusion and cooling. All bends, tees, reducers, couplers, junctions, end caps, adaptors, manhole connectors and other fittings shall be compatible with the HDPE drainage system and suitable for the intended service. Connections to manholes, inspection chambers, catch pits and other drainage structures shall be executed using suitable flexible connectors, puddle flanges, adaptors or approved arrangements as detailed in the drawings. The completed pipeline shall be inspected for line, level, gradient, joint integrity, obstruction and free flow, followed by applicable leakage/watertightness testing prior to backfilling and commissioning. Compliance shall be demonstrated through valid BIS/ISI certification and relevant material and performance test certificates confirming conformity with the specified grade, dimensions and pressure rating. Complete including 300 mm nominal diameter HDPE drainage pipe, 10 kg/cm² pressure rating, laying, cutting, alignment, levelling, jointing, bends, tees, reducers, couplers, chamber connections, fittings, testing and all necessary accessories, as per the detailed design drawings and specifications issued for the work, complete in all respects.
Sports / 13	Design, Supply, Installation, Testing and Commissioning of cricket ground 15630sqm Irrigation/sprinkler System as per sprinkler as per detailed design layout, site conditions requirement, scope of work to make sprinkler system operate smoothly. Including all material & Labour charges, piping, popup sprinkler with swing joints, all Cabling with conduit, Pumps (1 working + 1 standby) min. 7.5HP, Automatic Control Panel, Valves, Disc Filter, Clamps, NRV, Etc all complete to run Smooth Operation of Sprinkler.) complete as per direction of Engineer-in-Charge. Pop-up sprinkler having variable adjustable arc (50 to 360 degrees) nozzle capable of covering 15 to 21 mtr. The sprinkler shall have a minimum of 3-1/2-inch (9 cm) pop-up stroke to bring the rotating nozzle turret into a clean environment. The sprinkler shall be available as an a 6-inch (15cm), double acting air vacuum release 2 " Air release valve with Pressure Gauge The Air release valve shall be capable of both releasing and admitting air from and into the line. The working pressure shall be 5 bar. 12" ,6" & 10"" rectangular Valve Box with greenlid and corrugated structure with unique shovel access slot and bolt hole knockout AUTOMATIC BACKWASH FILTER - with capacity matching the Pump Design flow having a suitable inlet connections , to create helical effect in the incoming water. HYDROPNEUMATIC VERTICLE MULTI STAGE pumpset of having discharge 6.0 lps@65 mtr head . (2W+ 1S) WITH PRESSURE TANK AND VFD SYSTEM set having panel box and fixed along with following accessories starter ,start / stop push buttons, Ammeter, Voltmeter, Indicating lamps, MCB with cable, etc. Providing & Fixing of ,Suction ,Delivery & Header Pipe "Providing & fixing of control Valve/Butterfly Valve In mainline for bypass and flow diversion of approved quality 3"" Providing & fixing of Non-Return Valve to prevent back flow 3"" "Providing and fixing of Direct burial 16 AWG x 1C cable for TWO way communication between Controller and valves" Providing and fixing of PVC conduit Pipe complete 32 mm "Providing and fixing of Pro-C - Controller with Output Module Internal transformer control system, cycle +soak, Rain delay, SOLARSYNC controlling upto 1 master valve with diagnostic feature In	Design, supply, installation, testing and commissioning of complete automatic irrigation/sprinkler system for cricket ground of approximately 15,630 m², including hydraulic design, piping network, popup rotary sprinklers, valves, filtration system, pump sets, control and automation system, electrical cabling, conduits, fittings and all necessary accessories, complete in accordance with the approved detailed irrigation layout, hydraulic design, architectural details, site conditions and requirements of the Engineer-in-Charge. The system shall comprise the following: Popup rotary sprinklers: Adjustable arc 50°–360°, with interchangeable/adjustable nozzles capable of providing a throw radius of approximately 15–21 m, minimum 90 mm (3½ inch) popup stroke, with 150 mm (6 inch) model where required. Sprinklers shall be provided with suitable swing joints and installed at locations and spacing shown in the approved irrigation layout. HDPE/uPVC piping network: Mainline, submain and lateral piping of suitable diameter and pressure class as determined by the approved hydraulic design, including all bends, tees, reducers, couplers, unions, clamps, supports, fittings and connections. Pipe routing, sizes, pressure rating and installation shall be as shown in the detailed irrigation drawings. Pump sets: Vertical multistage hydropneumatics pump system comprising 2 working + 1 stand-by (2W+1S), each designed for approximately 6.0 L/s at 65 m head, minimum 7.5 HP or as established by the approved hydraulic calculation, complete with suction, delivery and header piping, pressure tank and VFD control. Automatic control panel: Complete panel suitable for automatic operation of the irrigation system, including VFD interface, starters, MCB/MCCB protection, overload protection, ammeter, voltmeter, indication lamps, start/stop push buttons, control wiring and required electrical protection. Automatic filtration system: Automatic self-cleaning/backwash filtration unit sized for the design pump discharge, with suitable inlet/outlet connections and internal flow arrangement to promote effective filtration and prevent blockage of sprinkler nozzles. Filtration unit shall be suitable for the quality of irrigation water and the hydraulic design. Control valves: 3inch butterfly/control valves on the mainline for isolation, bypass and flow diversion, complete with all necessary fittings and accessories. Nonreturn valves: 3inch NRV on the pumping/distribution system to prevent reverse flow and protect the pumping equipment. Air release valve: 2inch double acting air/vacuum release valve capable of automatic release and admission of air during filling, draining and operation of the pipeline, with pressure gauge and suitable for 5 bar working pressure. Solenoid valves: 2inch automatic solenoid globe valves for individual irrigation zones, complete with suitable fittings, waterproof connections and control wiring. Valve boxes: Heavy duty rectangular valve boxes of approximately 6inch, 10inch and 12inch sizes, as required by the valve arrangement, with green lids, reinforced/corrugated construction, access provision and suitable locking/bolt arrangement.

	wire shorttest, voltage test at stations, standard accessories Complete, Providing and fixing of 2" Solenoid globe ,Providing and fixing of direct bury -on wire connector with strain relief 1 with waterproof silicon sealant." Providing and fixing of Voltage stabiliser Brands:- i) Pipe & Valve:-Harit/Prince/Supreme, ii) HDPE Pipe:-Duraline /Times Technoplast/supreme, iii) SPRINKLERS, AUTOMATION & ACCESSORIES:- Rain Bird ,USA iv) FILTERATION UNIT:- Azud, Spain, v) Pumps :- Kirloskar/Crompton Greave /KSB /Willow etc complete as per direction of Engineer-in-Charge.	Irrigation controller: Programmable multi-station controller with output modules and internal transformer, capable of automatic control of irrigation zones and master valve, incorporating cycle and soak, rain delay, solar synchronisation compatibility, station diagnostics, wire short detection and station voltage testing, with standard accessories. Communication/control cabling: Direct burial 16 AWG × 1C control cable for two-way communication between controller and field valves, complete with suitable waterproof direct burial connectors and strain relief arrangement. Cable conduit: 32 mm PVC conduit for protected routing of control cables wherever required, including bends, couplers, junctions and accessories. Pressure regulation and monitoring: Pressure gauges, isolation valves and associated fittings shall be provided at pump/header and other locations were indicated in the hydraulic design to facilitate system operation, testing and maintenance. Electrical protection: Voltage stabiliser and all necessary electrical protection, earthing, control wiring and accessories required for safe and reliable operation of the complete system. Pipe laying and installation: All piping shall be laid at the required depth and gradient with proper bedding, alignment, jointing, testing and protection. Sprinkler locations, pipe sizes, zoning, valve locations, pump arrangement, cable routes and control points shall strictly follow the approved detailed irrigation layout and hydraulic design drawings. Testing and commissioning: The complete system shall be hydraulically and electrically tested for leakage, pressure, valve operation, sprinkler rotation, coverage, control operation and proper functioning of automatic irrigation cycles before commissioning. All materials and equipment shall conform to the applicable Indian Standards and relevant international standards, wherever applicable, and shall be suitable for outdoor irrigation use. Technical details, equipment capacities, pipe diameters, valve locations, sprinkler spacing, zoning, cable routing, pump arrangement, foundation requirements and other installation requirements shall be strictly as per the approved detailed irrigation/hydraulic design drawings and architectural details. The item shall include complete design coordination, supply, transportation, installation, laying, jointing, fittings, excavation interface, testing, commissioning, electrical and control accessories, labour, tools, plants, wastage and all incidental works necessary for a complete and operational automatic cricket ground irrigation system, complete as directed by the Engineer-in-Charge.
Sports / 14	Preparation of cricket ground as per ICC norms of ground area around 20000sqm including all supplying and laying as per drawing/design and Including Cultivating By Rotavator all the ground and remove all jungle weeds and all the scraps and shifting all the debris at dumping station, Filling new good earth in the ground, Levelling by computerize leveler by Tractor, Levelling by Fanti with manual labor, Picking all the pebbles and stone by manual labor. ,Spreading organic fertilizer i.e. 1000 bag of Bio-compost, 100 bags of Neem khali,5 bags of M.O.P,5 bags of D.A.P,5 bags of urea,5 bags of Amonium sulphate,5 bags of potash,100 kg High tech Zinc and 50 kg of Humocial etc., Anti-Termite all the ground., Laying of grass selection No.1., Time weeding of unwanted grass., Watering and Rolling the ground, Cutting the grass properly for ready carpet,Three month maintenance after laying the grass, complete as per direction of Engineer-in-Charge.	Preparation and development of cricket ground of approximately 20,000 m², including site clearance, cultivation, earth filling, grading, soil preparation, fertilisation, antitermite treatment, natural turf establishment, irrigation, rolling, mowing, weed control and maintenance, in accordance with the approved cricket ground layout, detailed design, applicable ICC requirements and Detailed Technical Specifications, complete as follows: Cultivation of the entire ground by rotavator and removal of jungle, weeds, unwanted vegetation, scraps, stones, roots and debris, including collection, loading, transportation and disposal at approved dumping location. Supply, spreading and filling of approved good earth suitable for cricket ground development, free from stones, roots, debris and other deleterious materials. For detailed material properties and quality requirements, refer to the Detailed Technical Specifications. Levelling and grading using tractor mounted computerized/laser controlled leveller to achieve the levels, slopes and surface drainage requirements shown in the approved drawings. Final manual dressing and levelling, including removal of pebbles, stones and local surface irregularities. Supply and uniform application of organic and chemical fertilisers, including approximately 1000 bags bio compost, 100 bags neem cake, 5 bags MOP, 5 bags DAP, 5 bags urea, 5 bags ammonium sulphate, 5 bags potash, 100 kg high-tech zinc and 50 kg humic material, or as directed based on soil testing and approved agronomic requirements. For detailed material specifications and application requirements, refer to the Detailed Technical Specifications. Soil testing and preparation of the soil profile as required for natural cricket turf establishment. For soil quality parameters and testing requirements, refer to the Detailed Technical Specifications.

		Anti-termite treatment to the ground using approved materials and application methodology. For material, concentration, application rate and testing requirements, refer to the Detailed Technical Specifications. Supply and laying of Selection No. 1 natural grass turf suitable for cricket outfield application, including preparation, laying, jointing, establishment and replacement of defective/damaged turf. For detailed turf species, quality, density, rooting and other material requirements, refer to the Detailed Technical Specifications. Initial and subsequent watering through the approved irrigation system, including all operations required for proper turf establishment. Rolling using suitable turf roller at appropriate stages to achieve a uniform and properly consolidated playing surface. Periodic mowing/cutting of grass using suitable turf maintenance equipment to establish the required finished grass height and uniform carpet. Timebound removal/control of unwanted grass and weeds during turf establishment. Three months maintenance after laying of turf, including watering, mowing, rolling, weeding, fertilisation, patch repair and other necessary turf care operations. The finished cricket outfield shall be uniform, stable, properly established and free from excessive stones, weeds, bare patches, depressions and objectionable undulations. All finished levels, grading, soil profile, drainage interface, turf extent, irrigation arrangement and surface requirements shall be strictly as per the approved detailed drawings and architectural/agronomic details. Where technical details, material properties, testing requirements or workmanship criteria are not specifically stated in this BOQ item, the same shall conform to the Detailed Technical Specifications issued for the work. Complete including all materials, good earth, fertilisers, turf, anti-termite treatment, labour, machinery, transportation, disposal, irrigation, rolling, mowing, maintenance, tools, plants and all incidental works necessary for complete development of the cricket ground, as per approved drawings, Detailed Technical Specifications and direction of the Engineer-in-Charge.
Sports / 15	Preparation of Cricket pitch 5no of size 100 feet x 10 feet each as per International cricket standards as specified below :- Excavation of earth 1'-6' depth., Shifting of earth from pitches to outside, Laying of 4" layer of brick blast, filling of Yamuna sand compact with roller, Filling of 4" layer of cores sand double washed and compact with roller manually, Filling of fine sand 4" layer and compact by roller manually, Filling of 4" layer of Lumbee sand & compacting by roller manually, Pouring of black clay 10" layer after breaking special size of 12 mm, Plantation of grass selection no 1 on pitches, Anti-Termite all the wickets, Top dressing with Bulli sand after grass cutting with zero machine, Watering and rolling with manual labour 10 labour for Twenty days, Marking All the Pitches complete as per direction of Engineer-in-Charge. As Per guideline of ICC	Preparation and development of 5 Nos. natural cricket pitches, each approximately 100 ft x 10 ft (30.48 m x 3.05 m), including excavation, disposal of earth, preparation of engineered pitch profile, specified ballast/sand/clay layers, compaction, natural turf establishment, antitermite treatment, top dressing, watering, rolling, grass cutting and pitch marking, in accordance with the approved detailed drawings, applicable ICC/BCCI cricketground requirements and Detailed Technical Specifications issued as Annexure, complete as follows: Pitch quantity and size: 5 Nos., each approximately 100 ft x 10 ft. Excavation: Excavation to approximately 1'6" depth, including removal, loading, shifting and disposal of excavated earth at approved location. Brick ballast layer: Providing and laying approximately 4" thick layer of approved brick ballast, uniformly spread, levelled and compacted. Yamuna sand layer: Providing and laying approved Yamuna sand, uniformly spread and compacted. Coarse sand layer: Providing and laying 4" thick layer of clean, double washed coarse sand and compacting uniformly. Fine sand layer: Providing and laying 4" thick layer of approved fine sand and compacting uniformly. Lumbee sand layer: Providing and laying 4" thick layer of approved Lumbee sand and compacting uniformly. Black cricket clay layer: Providing and laying approximately 10" thick layer of approved black cricket pitch clay, suitably processed/broken to approximately 12 mm maximum particle size, spread uniformly and compacted to achieve the required pitch profile. Natural turf: Supply and establishment of Selection No. 1 natural cricket grass suitable for cricket pitch application, including laying, jointing and establishment. Anti-termite treatment: Complete anti-termite treatment to the pitch area using approved material and application methodology. Top dressing: Providing and applying approved Bulli sand after grass cutting, uniformly spread to achieve the required surface finish. Grass cutting: Cutting using suitable precision/zero cut mowing equipment to establish the required cricket pitch grass height and uniformity.

		Watering: Controlled and regular watering during establishment and preparation using suitable irrigation arrangement. Rolling: Rolling with suitable cricket pitch roller/manual rolling operation to achieve the required consolidation and playing characteristics. Labour: Provision of approximately 10 labourers for 20 days, or as required for proper completion and establishment. Pitch marking: Accurate marking of all 5 pitches and creases as per approved cricket layout and applicable requirements. Finished surface: Uniform, level, firm and properly established natural turf playing surface, free from stones, weeds, depressions and objectionable irregularities. All pitch dimensions, layer thicknesses, finished levels, soil/clay characteristics, turf specification, drainage interface, irrigation requirements, compaction criteria, material testing, quality requirements and acceptance criteria shall be as specified in the Detailed Technical Specifications issued as Annexure and as per approved detailed drawings. Complete including excavation, shifting/disposal of earth, all specified ballast/sand/clay layers, compaction, natural turf, anti-termite treatment, top dressing, watering, rolling, grass cutting, marking, labour, machinery, tools, plants and all incidental works necessary for complete preparation and establishment of 5 Nos. cricket pitches, complete as directed by the Engineer-in-Charge.
Sports / 16	Supply of Automatic Pop-Up Sprinkler system for Hockey field of area around 7920sqm (110m x 72m FOP) consisting of HDPE pipe of 160mm - 30 meter from water source to corner of the hockey field & 110mm - 350 meter ring on hockey field periphery of pressure rating 12.5kg/cm² conforming to IS:4984 (1995) ,6 nos Large Radius Pop-Up Sprinkler of 45 meter radius capable of discharging 14.5 lps @ 6 bar from the periphery with 6 nos nylon glass field solenoid valve of 3" inlet size covered with 20" Jumbo Valve box, Programmable single key start controller for auto operation of the solenoid valves and pump through pump start relay with safety valves (Continuous Air Release Valve of aluminium & Quick Pressure Relief Valve made of brass to ease out the pressure in case of any issue with solenoid valve or with system), 2 nos of Disc Filter with heavy duty metallic clamp (50m³/hr discharge capacity) for keeping the system safe from foreign particle. With centrifugal pump set with 50.H.P motor (TEFC 2 pole 3000 rpm) complete with mechanical seal,base frame, coupling, 30 meter single core cable of 16 sq mm copper, Star-Delta Control Panel with single phase preventer, Low level protection sensor for dry Brands:- i) Pipe & Valve:-Harit/Prince/Supreme, ii) HDPE Pipe:- Duraline /Times Technoplast/ supreme, iii) SPRINKLERS, AUTOMATION & ACCESSORIES:- Rain Bird ,USA iv) FILTRATION UNIT:- Azud, Spain, v) Pumps:- Kirloskar/Crompton Greave /KSB/ Willow etc. complete as per direction of Engineer-in-Charge.	Design, supply, installation, testing and commissioning of complete automatic popup sprinkler irrigation system for Hockey Field of approximately 7,920 m² (110 m × 72 m FOP), including HDPE piping network, largeradius popup sprinklers, solenoid valves, valve boxes, filtration system, pump set, control panel, automation, cabling and all necessary accessories, in accordance with the approved detailed irrigation/hydraulic layout, site conditions, applicable technical requirements and Detailed Technical Specifications issued as Annexure, complete as follows: Mainline: Approximately 160 mm HDPE pipe, 12.5 kg/cm² pressure rating, for approximately 30 m from water source to hockey field, conforming to IS 4984, or as per approved hydraulic design. Perimeter ring main: Approximately 110 mm HDPE pipe, 12.5 kg/cm² pressure rating, forming the field periphery distribution ring, with final diameter and routing as shown in the approved irrigation layout. Popup sprinklers: 6 Nos. large radius popup sprinklers, suitable for approximately 45 m radius coverage and capable of delivering approximately 14.5 L/s at 6 bar, complete with suitable swing joints, fittings and connections. Final sprinkler location, spacing and coverage shall be as per hydraulic design. Solenoid valves: 6 Nos. 3inch inlet nylon/glass reinforced solenoid valves, suitable for automatic zone control, complete with fittings and accessories. Valve boxes: Heavy duty 20inch valve boxes with suitable covers and access arrangements for protection and maintenance of solenoid valves. Filtration: 2 Nos. automatic/appropriate disc filtration units, each sized for approximately 50 m³/hr discharge capacity, complete with heavy duty clamps and accessories, suitable for protecting sprinkler nozzles and downstream components from suspended particles. Pump set: Centrifugal pump set with 50 HP TEFC, 2pole, approximately 3000 rpm motor, complete with mechanical seal, base frame, coupling and all necessary pump accessories. Final pump duty shall conform to the approved hydraulic calculation. Pump electrical/control system: Star delta control panel complete with suitable starter, single phase preventer, low level/dry run protection, pump start relay, MCB/MCCB, overload protection, indication lamps, control wiring and necessary safety accessories. Control and automation: Programmable controller with single key/manual start facility for automatic operation of solenoid valves and pump through pump start relay, including necessary control modules and accessories. Safety and pressure protection: Continuous air release valve of suitable corrosion resistant construction and quick pressure relief valve of suitable material and rating, positioned as required by the hydraulic design to release trapped air and protect the system against abnormal pressure.

		Cabling: Required power/control cabling, including approximately 30 m of 16 mm² single core copper cable for the pump arrangement and control cables for solenoid valves, with suitable protection and routing. Pipe installation: HDPE pipes shall be laid, jointed, supported and tested in accordance with the approved irrigation layout, hydraulic design and applicable installation requirements, including all bends, tees, reducers, couplers, valves, fittings, clamps, supports and accessories. Testing and commissioning: Complete hydraulic and electrical testing, pressure testing, leakage inspection, sprinkler operation, uniformity/coverage verification, valve sequencing, controller operation and pump performance testing prior to commissioning. All pipe sizes, pressure ratings, sprinkler locations and spacing, pump duty, valve locations, filtration capacity, zoning, cable routing, controller arrangement, safety devices and other technical parameters shall be as shown in the approved detailed irrigation/hydraulic layout and drawings. Material properties, testing, quality requirements and workmanship shall conform to the Detailed Technical Specifications issued as Annexure. Complete including all materials, equipment, piping, sprinklers, valves, valve boxes, filtration units, pump set, control panel, automation, cabling, conduits, fittings, jointing, testing, commissioning, labour, tools, plants and all incidental works necessary for a complete and operational hockey field irrigation system, as directed by the Engineer-in-Charge
Sports / 17	Supplying and installation of FIH approved Global Category Synthetic Hockey surface from a FIH Preferred Supplier having synthetic turf of minimum 13mm pile height and with minimum 15mm cast in-situ shockpad on prepared bituminous surface with laying & jointing as per FIH requirement & the pasting of sythetic turf as per manufacturer recommendation & maintaining International Hockey Federation (FIH) specifications including all marking on the surface as per FIH rules and standard etc. complete as per the instructions of the engineer-in-charge. Synthetic Hockey Turf should be from European/Australian/American origin only and UV protected. The scope includes testing and certification conforming to Global Category FIH. Colour of the turf: Blue or as per client selection. Manufacturer- ACT(Spain)/SYNCOTTS/EBACO/MICEZO	Supplying and installation of FIH Global Category certified water-based synthetic hockey turf system from an FIH Preferred Supplier, comprising minimum 13 mm pile height, short-pile, dense non-infilled synthetic turf laid over a minimum 15 mm resilient elastic shock-pad on a properly prepared bituminous base, including surface preparation, turf laying, cutting, seaming, jointing, adhesive fixing and finishing, complete as per approved drawings and FIH requirements. The turf shall be manufactured from UV-stabilized polyethylene (PE) monofilament yarn, with a reference construction of approximately 150-micron fibre, minimum 6,000 denier, 3/16-inch gauge and approximately 50 oz/yd² face weight, with suitable multi-layer backing and perforated construction for drainage, or equivalent technical performance from an approved FIH-certified system. The shock-pad shall be a minimum 15 mm resilient elastic layer suitable for the certified turf system. The complete playing surface shall comply with applicable FIH Global Category performance requirements, including ball rebound, ball roll, ball-roll consistency, surface regularity and other applicable performance criteria. As reference values, ball rebound shall be 100-400 mm, ball roll >10.0 m, ball-roll consistency within ±10% of the overall mean, and surface undulation shall not exceed 6 mm under a 3 m straightedge and 2 mm under a 0.3 m straightedge. The turf shall be installed with uniform pile orientation and properly finished joints using compatible adhesives, seam tapes and accessories. FIH-compliant field markings shall be provided accurately as per approved field layout and applicable FIH requirements. Turf colour shall be blue or as selected by the Client and shall be compatible with the approved automatic irrigation system. The system shall have valid FIH Global Category certification and shall be supported by applicable certification and test documentation. For detailed requirements regarding yarn, backing, pile density, shock-pad, drainage, testing, installation methodology, certification, warranty and acceptance criteria, refer to the Detailed Technical Specifications issued as Annexure. Complete including turf, shoc-kpad, adhesives, jointing materials, markings, specialist labour, tools, equipment, testing, certification, wastage and all incidental works, as per approved drawings, FIH requirements and directions of the Engineer-in-Charge.

Sports / 18	Supplying of aluminum Hockey Goal Post- • Uprights & Crossbars made from 75mm x 50 mm aluminum • Fully welded corner joints provide superior strength and added safety • Back bar consists of a single weighted tube with 2 rubber wheels allowing for easy movement 460mm high aluminum backboard panels with absorbent impact noise reducing carpet on all inside faces. Powder-coated white front Structure, net supports, and Green backboards. Size: - 3.66m x 2.14m 3mm as per FIH specification Goal Post etc. complete as per direction of Engineer-in-Charge.	Supplying, installing and positioning FIH-approved portable/movable aluminium hockey goal posts, complete with goal frame, reinforced backboards, net-support system, integral weighting/stabilisation arrangement, wheels and all necessary fittings, suitable for international-level hockey competition and conforming to FIH requirements and EN 750. The goal shall have regulation dimensions of 3.66 m internal width × 2.14 m height, with 75 × 50 mm reinforced aluminium uprights and crossbar having a minimum 7 mm reinforced front face for resistance to ball impact. Front corners and exposed edges shall be rounded with approximately 3 mm ±1 mm radius. Corner joints shall be fully welded or equivalent high-strength construction. The rear structure shall incorporate minimum 50 mm diameter aluminium rear/net-support tubes, arranged outside the net to prevent ball rebound, together with an integral counterweight/weighted back-bar system providing stability during play. The goal shall be fitted with puncture-resistant cellular-rubber wheels or equivalent heavy-duty wheels suitable for repeated movement on synthetic hockey turf without damaging the playing surface. The goal shall have 460 mm high reinforced aluminium backboard and sideboard panels, with impact-absorbing and noise-reducing rubber/EPDM or equivalent weather-resistant lining on all internal faces. Backboards and sideboards shall be sufficiently rigid and arranged so that the ball cannot rebound through or beyond the goal structure. The net-support arrangement shall provide a free-hanging net, with the net retained by an integral/approved retaining system rather than protruding hooks where applicable. The net shall be UV-stabilised, weather-resistant and suitable for hockey, with approximately 3 mm HDPE/PE twine and 45 mm knotted mesh or equivalent approved construction. Net World Sports The front frame shall be finished in white UV-resistant polyester powder coating, with backboards/sideboards in green or other approved colour. All aluminium and other metallic components shall be corrosion-resistant and suitable for prolonged outdoor exposure. Net-support brackets and fixings shall not project beyond the goal-post/crossbar profile or create a ball-rebound hazard. International Hockey Federation The movable goal shall incorporate suitable integral anchoring/locking provisions to prevent unintended movement during play. Wheels, counterweights and stabilising arrangements shall be designed so that the goal remains stable during normal playing conditions while allowing convenient movement for maintenance and field reconfiguration. The complete goal shall be supplied with valid FIH approval/certification for the offered model or equivalent evidence of compliance, and shall conform to the applicable requirements of FIH and EN 750. The contractor shall submit relevant certification, dimensional details, material details, installation instructions and warranty documentation for approval prior to supply. For detailed dimensions, aluminium section properties, weight/counterweight arrangement, wheel details, net construction, fixing arrangements, finish, tolerances, testing and other technical requirements, refer to the approved Detailed Design Drawings and Detailed Technical Specifications issued as Annexure. Complete including aluminium goal frame, reinforced backboards and sideboards, impact/noise-absorbing lining, rear supports, integral counterweights, wheels, net, net-retaining system, fittings, protective finish, transportation, installation, positioning, testing and all incidental works, complete as per FIH requirements, approved drawings and directions of the Engineer-in-Charge
Sports / 19	Supplying and Installation of Synthetic Turf laid by FIH certified field builder and jointing and fixing the same on the sub base and the pasting of synthetic grass including all marking on the surface as per FIVB/IKF/IKKF rules and standard etc. complete as per the instructions of the engineer-in-charge. (For Volleyball, Kho-Kho & Kabbadi)	Supplying and installation of high-quality synthetic sports turf suitable for Kabaddi, Kho-Kho and Volleyball recreational/training applications, laid over the approved prepared sub-base, including surface preparation, turf laying, cutting, jointing, adhesive fixing, edge securing and complete sports-court markings, as per approved drawings and Detailed Technical Specifications issued as Annexure. The turf shall comprise UV-stabilized, weather-resistant PE synthetic fibres, with uniform pile height, suitable fibre density, durable primary backing and weather-resistant secondary backing/coating, providing dimensional stability, resistance to abrasion, colour fading and repeated sports use. The system shall provide a uniform, resilient and slip-controlled playing surface with suitable drainage characteristics.

		The turf shall be installed over the approved sub-base with properly prepared joints using compatible polyurethane/synthetic-turf adhesive and jointing tape, with no visible open joints, wrinkles, lifting or uneven transitions. Perimeter edges shall be securely fixed to prevent movement during use. Court markings for Kabaddi, Kho-Kho and Volleyball shall be provided using durable, UV-resistant and compatible marking material, with dimensions and line widths as per the approved sports layout and applicable federation requirements. The Kabaddi and Kho-Kho playing areas shall be marked in accordance with the respective approved layouts. Where federation-level competition compliance is required, the playing surface shall comply with the applicable IKF/KKFI requirements or shall be replaced by the respective federation-approved mat system. IKF specifies a synthetic Kabaddi mat of Japanese synthetic rubber + EVA, 25-40 mm thickness and 25-30 Shore A hardness, while KKFI's published Kho-Kho mat specification identifies 35-40 Shore A hardness and 25-50 mm thickness. Kabaddi IKF - The turf system shall be suitable for outdoor exposure, UV-resistant, weather-resistant and moisture-resistant, with adequate dimensional stability and drainage. For detailed requirements regarding fibre type, pile height, denier, density, backing, coating, drainage, shock absorption, friction, abrasion, UV resistance, jointing, adhesive, testing, installation methodology, warranty and acceptance criteria, refer to the Detailed Technical Specifications issued as Annexure. Complete including synthetic turf, sub-base preparation interface, jointing materials, adhesives, edge fixing, sports markings, specialist labour, tools, equipment, wastage and all incidental works necessary for a complete playing surface, as per approved drawings, Detailed Technical Specifications and directions of the Engineer-in-Charge.
Sports / 20	Supplying and erection of Volley Ball Pole Fixed Type Made of 3" x 4" Mild Steel pipe 2.55m height adjustable with inside special ratchet system for tightening the net design according to ASTM F2950 or EN 1271.. As per U.S. standard: ASTM F2950-14/ European standard:EN 1271:2015 This enables perfect tension control for the net. Use of branded MRF Epoxy paint. complete as per the instructions of the engineer-in-charge.	Supplying and erection of fixed type volleyball posts, fabricated from heavy-duty 3" x 4" mild steel hollow sections, minimum overall post height 2.55 m, with adjustable net-height arrangement and integrated ratchet/winch-type net tensioning system for accurate and secure control of net tension. The posts shall be designed for fixing into suitable ground sockets/anchoring arrangements and shall be rounded, smooth and free from sharp or projecting components. The posts shall be corrosion-protected and finished with durable epoxy/polyurethane or powder-coated paint system suitable for indoor/outdoor sports use. The tensioning mechanism shall incorporate a self-locking ratchet/winch system capable of maintaining the required net tension without unintended release, with operating handles positioned safely within or away from the playing area. The system shall permit adjustment of net height to suit men's and women's play, with net heights of 2.43 m and 2.24 m, respectively. Posts shall be positioned approximately 1.00 m outside the sidelines for competition configuration. Scribd - The complete system shall conform to the applicable requirements of EN 1271:2014, Volleyball Equipment, Functional and Safety Requirements and Test Methods, including requirements for post strength, deflection, permanent deformation, tensioning-device safety and ground fixing. EN 1271 requires the tensioning mechanism to prevent unintended release and provides specific testing for post deflection and tensioning devices. iTeh Standards The post system shall be supplied complete with net tensioning cable/rope, pulleys, hooks, ground sockets/anchor plates, fixing hardware, protective caps and all necessary accessories. Where required for safety, suitable post padding shall be provided in accordance with the applicable standard and approved sports layout. For detailed section thickness, steel grade, anchorage/foundation arrangement, ratchet/winch mechanism, corrosion protection, paint system, tolerances, testing and other technical requirements, refer to the approved Detailed Design Drawings and Detailed Technical Specifications issued as Annexure. Complete as per EN 1271:2014, approved drawings, Detailed Technical Specifications and directions of the Engineer-in-Charge.
Sports / 21	Supplying and fixing of Fixed type Aluminium Tennis pole made of 80mm x 80mm square pipe 1.07m Height as per International Tennis Federation with special internal ratchet system for tightening the net. This enables perfect tension control for the net. Top cover made from Cast Aluminium with pulley. To Use of Branded Epoxy paint (MRF) complete as per the instructions of the engineer-in-charge.	Supplying and fixing a pair of fixed/socket-type aluminium tennis net posts, manufactured from reinforced extruded aluminium square profile of 80 x 80 mm, suitable for outdoor tennis courts and conforming to EN 1510 requirements. The posts shall be designed for regulation net installation with net height of 1.07 m at the posts, complete with internal net-tensioning mechanism, crank/ratchet arrangement and suitable net attachment system.

		Commercial standard products of this configuration use internally reinforced 80 × 80 mm aluminium profiles and concealed tensioning mechanisms. interplastic.pl - Each set shall comprise one tensioning post and one passive net-support post, with an internal screw/ratchet or equivalent self-locking tensioning mechanism, concealed operating crank and suitable cable/rope guide. The top of the tensioning post shall be provided with a cast aluminium removable cover/cap with pulley and safety arrangement, and the opposite post shall include suitable net retaining fittings. Taliano Sports - The posts shall be installed in aluminium/metal ground sleeves embedded in concrete, with minimum 350 mm insertion depth or as required by the approved foundation design, including sleeves, anchoring arrangement, caps and all necessary fixing hardware. The finished posts shall be anodized or powder-coated/epoxy finished, UV-resistant and corrosion-resistant, with smooth exposed surfaces and no sharp edges. Taliano Sports - The complete assembly shall be suitable for maintaining uniform net tension during play and shall safely withstand normal operational loads without excessive permanent deformation. The net-support system shall be compatible with a regulation tennis net having a maximum 8 mm diameter supporting cable, with the centre of the net maintained at 0.914 m by the centre strap. ITF Tennis - For detailed aluminium alloy/section thickness, tensioning mechanism, pulley, ground-sleeve dimensions, anchorage, surface finish, tolerances, net fixing arrangement and installation details, refer to the approved Detailed Design Drawings and Detailed Technical Specifications issued as Annexure. Complete including aluminium posts, internal ratchet/tensioning mechanism, cast aluminium caps, pulley, ground sleeves, anchoring/fixing hardware, net fittings, protective finish, installation, alignment and all necessary accessories, as per EN 1510, applicable ITF requirements, approved drawings and directions of the Engineer-in-Charge.
Sports / 22	Supplying & erection of basketball Pole as per FIBA Regulations (International Level) made of 8" dia pipe with 3.2 meter projection and basketball board transparent acrylic imported 25mm thick size 180cm x 105cm with dunking ring, net and frame. Ring is bolted through the backboard into the main frame construction for extra strength and durability Use of branded MRF Epoxy paint. (B.B.8.3.2.25) complete as per the instructions of the engineer-in-charge.	Supplying and erection of fixed outdoor basketball backstop unit, complete with structural pole/support, transparent acrylic backboard, breakaway/dunking ring, net, mounting frame, protective padding, anchoring arrangement and all necessary accessories, suitable for outdoor basketball use and conforming to applicable FIBA Basketball Equipment requirements and EN 1270. The support structure shall be fabricated from heavy-duty steel pipe of minimum 200 mm (8") diameter, suitably reinforced and designed to provide a minimum 3.20 m projection from the face of the supporting structure to the backboard/ring assembly. The complete structure shall be rigid and securely anchored to the RCC foundation to prevent excessive movement or vibration during play. The backboard shall be transparent, impact-resistant acrylic/polycarbonate or approved equivalent, minimum 25 mm thick, with overall dimensions of 1800 × 1050 mm, mounted on a rigid steel frame with suitable edge protection. The backboard shall be accurately aligned and securely bolted to the main support structure. FIBA requirements specify a regulation backboard of 1,800 × 1,050 mm, with the top edge at 2.90 m and the ring level at 3.05 m above the playing floor. The basket shall comprise a heavy-duty pressure-release/breakaway dunking ring, designed for repeated impact and dunking use, with suitable spring mechanism and mounting arrangement. The ring shall be securely connected through the backboard/support frame, with the mounting designed to transfer loads safely to the main structure. The ring shall be installed at a height of 3.05 m above finished playing surface and provided with a weather-resistant nylon/PE net. The backboard and supporting structure shall be provided with impact-absorbing protective padding at all locations required by FIBA, including suitable bottom and side backboard protection. FIBA requirements specify backboard padding of approximately 20–27 mm on front/back/side surfaces and 48–55 mm at the bottom edge, with support-structure padding extending to the required height and length. FIBA Refereeing All steel components shall be corrosion-protected by suitable anti-corrosion treatment and finished with exterior-grade epoxy/polyurethane or powder coating, suitable for prolonged outdoor exposure. Fasteners shall be corrosion-resistant and all exposed edges shall be rounded or suitably protected.

		The complete unit shall be designed for safe outdoor use, with structural rigidity and vibration characteristics suitable for basketball play. For FIBA-level equipment, the backboard support structure and ring shall comply with the applicable EN 1270 requirements; visible vibration following a dunk shall be within the applicable FIBA performance requirement. For detailed structural design, steel grade and thickness, reinforcement, foundation/anchor-bolt arrangement, backboard frame, ring mechanism, padding, coating system, tolerances, testing and installation requirements, refer to the approved Detailed Design Drawings and Detailed Technical Specifications issued as Annexure. Complete including steel pole/support, structural frame, 1800×1050×25 mm transparent backboard, breakaway/dunking ring, net, backboard/support padding, anchoring and foundation interface, protective coating, bolts, fittings, installation, alignment, testing and all incidental works, complete as per applicable FIBA requirements, EN 1270, approved drawings and directions of the Engineer-in-Charge.
Sports / 23	Supplying & erection of Hand Ball Goal post as per International Handball Federation movable in ground type made of 80 x 80mm Heavy MS pipe size 3m x 2m with back support made of 1.5" heavy pipe and PU wheels. Special net lock made of PVC for easily hanging the net. Fully welded corner joints provide superior strength and added safety for players. Use of branded MRF Epoxy paint, complete as per the instructions of the engineer-in-charge.	Supplying and erection of portable/movable handball goal posts, complete with goal frame, rear net-support structure, wheels, net-fixing system, anchoring/stabilizing arrangement and all necessary accessories, suitable for international-level handball and conforming to IHF requirements and EN 749:2004/AC:2006. The goal shall have a clear internal size of 3.00 m width × 2.00 m height, with the front frame fabricated from 80 × 80 mm heavy-duty MS square hollow section, with fully welded corner joints and reinforced connections. Exposed front edges shall be suitably rounded/smooth to ensure player safety. The frame shall have durable anti-corrosion treatment and exterior-grade epoxy/polyurethane or powder-coated finish, with contrasting colour bands as required by IHF. IHF requirements specify an 80 mm square goal frame with rounded edges and contrasting colour bands. The rear net-support frame shall be fabricated from minimum 1½" heavy-duty steel pipe or equivalent section, providing approximately 800 mm top run-back and 1000 mm bottom run-back, or as required by EN 749 and the approved design. The rear frame shall be foldable/removable where required for storage and transportation. Commercial EN 749 goal systems use galvanized steel rear/net-support members and similar run-back dimensions. The goal shall be provided with heavy-duty PU/rubber wheels or equivalent non-marking wheels for movement without damaging the playing surface. Suitable ground anchoring/stabilizing provisions shall be provided to prevent movement or tipping during play. Freestanding goals shall be securely anchored whenever in use, as required by EN 749 safety provisions. The net shall be securely attached using UV-resistant PVC/polypropylene net hooks or equivalent safety fixing system, without sharp or projecting components. The net shall be suitable for a 3.00 × 2.00 m handball goal, with approximately 100 mm mesh size and minimum 3 mm high-strength polypropylene/nylon cord, or equivalent approved construction. IHF The goal shall be designed so that the net prevents the ball from immediately rebounding from or passing through the goal. Where required for competition use, an internal catch net shall be provided in accordance with applicable IHF requirements. The complete assembly shall be stable, rigid, corrosion-resistant and suitable for repeated indoor/outdoor use. The goal shall be tested for stability, anchorage, structural integrity and safe operation after installation, with no excessive movement, breakage or permanent deformation under the applicable EN 749 test requirements. For detailed steel grade and thickness, welding, rear-frame configuration, wheel capacity, anchoring arrangement, net specifications, protective coating, colour bands, tolerances and installation requirements, refer to the approved Detailed Design Drawings and Detailed Technical Specifications issued as Annexure. Complete including MS goal frame, rear supports, wheels, net, PVC net hooks, anchoring/stabilizing system, protective coating, fittings, transportation, erection, alignment, testing and all incidental works, complete as per IHF requirements, EN 749, approved drawings and directions of the Engineer-in-Charge.

Supply, Installation, Testing & Commissioning (SITC) of one (01) movable dug-out for hockey stadium. Capacity of dug-out must be for 11 persons seating, all structure must be MS tubular frame (min. 50×50×3 mm) & Anti-rust primer + weatherproof paint finish, body covering with SS-304 stainless steel sheets (min. 1.2 mm thick) Properly fixed with stainless steel fasteners Roof Covering must be UV stabilized polycarbonate sheet (6–8 mm thick) with Approved shade & Weather resistant & impact resistant Seating 11 nos. individual molded HDPE / PP seats with backrest Weather resistant, ergonomically spaced Mobility with Heavy-duty turf-friendly polyurethane wheels (min. 150 mm dia) Minimum 2 wheels with locking brake system Finish & Safety Smooth rounded edges, Corrosion resistant, Suitable for outdoor stadium conditions
Warranty: Minimum 12 months from date of commissioning

Supplying, installing, testing and commissioning of one (01) movable hockey dug-out/team shelter having seating capacity for 11 persons, complete with structural frame, roof and side panels, individual seats, wheels, stabilising/anchoring arrangement, fittings and accessories, suitable for outdoor hockey stadium use and conforming to applicable FIH Hockey Team Shelter requirements and relevant safety standards. The shelter shall have a robust tubular structural frame fabricated from minimum 50 × 50 × 3 mm MS/structural steel sections, with welded joints and suitable diagonal/bracing members wherever required for structural stability. All steel components shall be mechanically cleaned and protected with anti-corrosion primer and exterior-grade weather-resistant epoxy/polyurethane or polyester powder coating.

The roof and side/front protection shall comprise UV-stabilized, impact-resistant polycarbonate sheets of minimum 6 mm thickness, securely fixed to the frame using corrosion-resistant fasteners, EPDM/neoprene sealing washers and suitable aluminium/steel glazing profiles. Polycarbonate shall be translucent/transparent or approved coloured finish and shall withstand outdoor weathering and accidental ball impact. FIH requirements specify impact-resistant polycarbonate/PETG/polyester glazing with a minimum thickness of 3 mm, therefore the proposed 6 mm thickness provides a higher project requirement. International Hockey Federation The shelter shall be designed for approximately 2.10 to 2.25 m clear/overall height, with adequate internal clearance for seated players and staff. The arrangement shall provide unobstructed visibility towards the field and shall have smooth, rounded and capped exposed edges without sharp projections.

Seating shall comprise 11 individual moulded HDPE/PP weather-resistant seats with backrests, ergonomically spaced and securely fixed to the structural frame. Seats shall be UV-stabilized, impact-resistant and suitable for prolonged outdoor exposure. Seat edges and backrests shall have rounded profiles with no sharp accessible edges. Seat construction shall comply with applicable requirements of EN 13200-4 as referenced by FIH. International Hockey Federation

The dug-out shall be provided with heavy-duty non-marking polyurethane/rubber wheels of minimum 150 mm diameter, suitably rated for the complete loaded shelter. A minimum of four swivel/transport wheels, including locking brakes, shall be provided, or an equivalent wheel arrangement demonstrated to provide safe movement and stability. Commercial movable shelters commonly use multiple swivel castors with brakes and additional stabilising outriggers. W&H Sports

The shelter shall incorporate an integrated ballast, locking or anchoring arrangement to prevent unintended movement, lifting or overturning during use. For a freestanding shelter, the anchoring system shall be capable of resisting wind and accidental user loads in accordance with the approved structural design and FIH requirements. International Hockey Federation

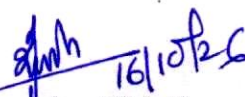
All exposed metallic components shall be corrosion-resistant and suitable for outdoor stadium conditions. Stainless steel SS-304 fasteners shall be used for exposed connections wherever applicable. The polycarbonate shall be securely fixed without excessive restraint that could cause cracking due to thermal movement.

The complete shelter shall be water-resistant, UV-resistant, impact-resistant and suitable for continuous outdoor exposure, with adequate drainage and no water accumulation on the roof. The structure shall be designed for the applicable site wind load in accordance with the approved structural design.

The complete unit shall be supplied with minimum 12 months warranty from the date of commissioning against manufacturing defects, structural defects and premature failure of supplied components under normal use.

		For detailed dimensions, structural member sizes, welding, anchorage/ballast, wheel capacity, polycarbonate fixing, seat details, coating system, wind-load design, tolerances and installation requirements, refer to the approved Detailed Design Drawings and Detailed Technical Specifications issued as Annexure. Complete including MS structural frame, anti-corrosion treatment, polycarbonate roof/side panels, 11 HDPE/PP seats, wheels with locking arrangement, anchoring/stabilising system, SS-304 fasteners, fittings, transportation, erection, alignment, testing, commissioning, warranty and all incidental works, complete as per FIH requirements, approved drawings and directions of the Engineer-in-Charge. Tender recommendation: I would use 6 mm polycarbonate rather than 8 mm unless the project specifically requires 8 mm. FIH's published minimum is 3 mm, while commercial premium shelters use around 3 to 5 mm, so 6 mm gives you a robust but still commercially obtainable requirement.
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All above corrigendum shall be applicable with immediate effect.

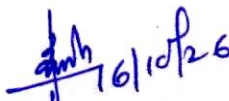

Engineer-in-Chief
Public Works Department
Nawa Raipur, Atal Nagar (C.G.)

No. 65011/804/SOR/

Nawa Raipur, Atal Nagar Dated 16/10/2026

Copy to the

1. P.A. to honorable Minister of P.W.D.C.G. Govt. Raipur.
2. Secretary, C.G. Govt. P.W.D. Nawa Raipur Atal Nagar.
3. Secretary, Finance Department C.G. Govt. Nawa Raipur Atal Nagar.
4. All Chief Engineers. P.W.D. Chhattisgarh.
5. All Superintending Engineer, P.W.D. Chhattisgarh.
6. Chief Technical Examiner (V) C.G. Nawa Raipur.
7. Accountant General, C.G. Raipur.
8. All Collectors, Chhattisgarh.
9. All Executive Engineer, P.W.D. Chhattisgarh.
10. Website Public Works Department <http://pwd.cg.nic.in>.


Engineer-in-Chief
Public Works Department
Nawa Raipur, Atal Nagar (C.G.)