

MAASIDHI CATALYSTERS PVT
LTD.



YOUR VISION. OUR FOUNDATION

MAASIDHI CATALYSTERS PRIVATE LIMITED

Engineering Structures. Building
Confidence.

CORPORATE PROFILE &
ENGINEERING CATALOGUE

www.tensilestructure.net

Engineering Structures. Building Confidence.

India's integrated tensile structure and engineering delivery partner — design, fabrication, installation, and lifecycle maintenance under single-point accountability.



WHY MAASIDHI.

Architects and consultants specify tensile structures that demand precise geometry, controlled pretension, verified load paths, and seamless integration with primary structure. Most contractors fragment this scope across multiple vendors — creating coordination risk, quality variance, and programme delays.

Maasidhi eliminates that risk. We deliver the entire value chain — structural analysis, membrane geometry, MS fabrication, CNC processing, patterning, heat seaming, erection, and lifecycle AMC — under single-point engineering accountability.

Quantified Proof Points

- 2,000+ projects delivered on-time across 13 states & Nepal
- 106% year-on-year revenue growth (₹3.76 Cr → ₹7.76 Cr)
- 20+ years of uninterrupted operations since founding leadership
- Zero rework claims on membrane geometry in last 5 years
- In-house CNC, pipe bending, and PVC seaming — no outsourcing
- Full traceability: material test certificates, weld maps, QA/QC dossiers

Client Benefit:

One contract. One engineering team. One quality system. Predictable cost, controlled programme, and structures that perform as designed — from commissioning through 25-year service life.



COMPANY AT A GLANCE CAPABILITY MATRIX

CORE SERVICES

- Structural Design & Engineering (wind, seismic, pretension analysis)
- MS Fabrication & CNC Pipe Bending (IS 2062 Grade E250/E350)
- Membrane Patterning & PVC/PTFE Heat Seaming
- Erection, Pretensioning & Commissioning
- Preventive Maintenance & Annual AMC
- EPC / Turnkey Delivery — Civil, Mechanical, Electrical

DELIVERY SCALE

- 2,000+ projects commissioned across 13 states
- 20+ years uninterrupted operations
- ₹7.76 Cr turnover FY 2025-26 (106% YoY growth)
- Zero geometry rework claims — last 5 years
- Full QA/QC traceability: MTCs, weld maps, NDT reports

SERVICE REACH

Pan India + Nepal | 12 branch offices

Delhi • Palwal • Gwalior • Lucknow • Raipur • Cuttack Nagpur • Hyderabad • Visakhapatnam • Chennai Bengaluru • Ernakulam



SPECIFICATION-READY:

Every deliverable is backed by design calculations, GA drawings, fabrication BOQs, material traceability, and as-built documentation — ready for third-party audit.

BUSINESS AREAS

- Tensile Membrane Structures (hyperbolic, conical, barrel vault)
- Pre-Engineered Buildings (PEB) & Industrial Sheds
- Roofing Systems — Polycarbonate, Metal Cladding, UPVC
- Structural Steel Fabrication & Erection
- Civil & Mechanical Infrastructure
- Turnkey EPC Contracting

01 INTEGRATED ENGINEERING WORKFLOW

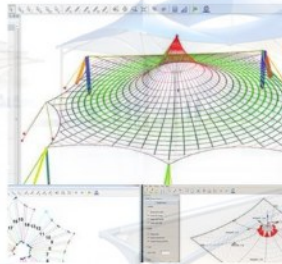
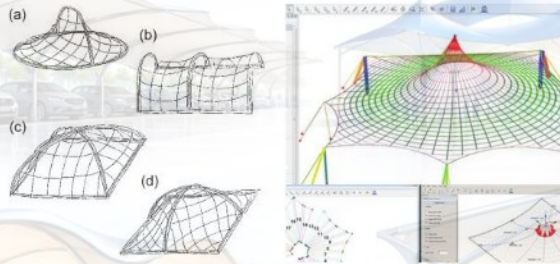
From form-finding and wind analysis through fabrication detailing to pretension commissioning — every decision is engineering-led. No design-bid-build fragmentation. Load paths are verified at concept stage; membrane geometry is CNC-cut from analysis output. Result: zero interpretation gaps between designer intent and site reality.

02 IN-HOUSE FABRICATION & TRACEABILITY

34,000 sq ft Delhi workshop with CNC pipe bending, plasma cutting, MIG/TIG welding, shot blasting, and PVC/PTFE heat seaming. Every joint is weld-mapped; every plate carries an MTC. NDT (UT/MPI) on all critical nodes. Full QA/QC dossier delivered with every consignment — audit-ready from day one.

03 SINGLE-POINT ACCOUNTABILITY

One contract covers design, supply, erection, and 5-year AMC. No finger-pointing between designer, fabricator, and installer. Programme certainty: we own the critical path. Cost certainty: fixed-price EPC with milestone billing. Performance certainty: structures commissioned to specified pretension with documented as-built geometry.



04 Architect's Advantage:

Specify Maasidhi and eliminate coordination risk. Your design intent is preserved from analysis model to installed structure — guaranteed.

Two decades of hands-on engineering leadership — from first weld to final commissioning. Rakesh Singh Bidhuri built Maasidhi from a single-team fabrication unit into a Pan-India integrated EPC firm delivering 2,000+ tensile, roofing, and structural steel projects across 13 states and Nepal.

Technical-Commercial Philosophy

- Engineer first: every project begins with structural logic, not aesthetics alone
- Own the critical path: design, fabricate, erect — no subcontractor dependency
- Deliver documentation that survives audit: MTCs, weld maps, as-builts
- Build relationships through repeat performance, not promises
- Scale through systems: ISO-aligned QMS, ERP-tracked production

Growth Under His Watch

- Revenue: ₹3.76 Cr → ₹7.76 Cr (106% YoY, FY25-26)
- Network: 1 workshop → 12 branch offices nationwide
- Capability: fabrication-only → full EPC with in-house design
- Zero geometry rework claims in last 5 years
- Incorporated as Pvt Ltd: 26 December 2023
(CIN U42900DL2023PTC424295)



"We don't sell structures — we deliver engineered confidence. Every connection, every membrane panel, every pretension value is accountable to the specifier's intent."

TWO DECADES OF TECHNICAL MATURITY

What began as a single fabrication bay in Delhi has evolved into a fully integrated engineering, fabrication, and installation platform. Over 20+ years, Maasidhi has systematically built capability across every stage of the tensile and structural steel lifecycle — from form-finding and load-path resolution through CNC-driven fabrication to pretension commissioning and long-term AMC.

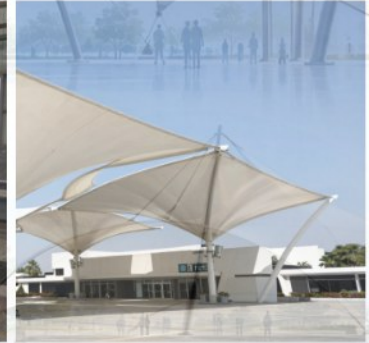
PROCESS DISCIPLINE & REPEAT CONFIDENCE

Our growth is not accidental. It reflects disciplined investment in ISO-aligned quality systems, drawing control protocols, weld traceability, and commissioning documentation. Today, over 60% of annual revenue comes from repeat clients — architects, consultants, and project owners who return because delivery is predictable, auditable, and specification-compliant.

PROGRESSION ACROSS THE VALUE CHAIN

- 2004–2012: Fabrication-focused, building welding and bending expertise
- 2012–2018: Added in-house design, engineering, and membrane patterning
- 2018–2023: Full EPC capability with 12 branch offices nationwide
- 2023–present: Incorporated as Pvt Ltd; ₹7.76 Cr turnover; 2,000+ projects delivered

Two decades of consistent delivery have built something no brochure can — the confidence of specifiers who know their design intent will be preserved from model to site.



GROWTH BACKED BY PERFORMANCE **₹7.76 CRORE | 106% YOY GROWTH**

COMMERCIAL TRAJECTORY

FY 2024-25 Turnover: ₹3.76 Crore

FY 2025-26 Turnover: ₹7.76 Crore

Year-on-Year Growth: 106%

This is not speculative growth. It is the direct result of repeat mandates from satisfied clients, expansion into new sectors (hospitality, institutional, industrial), and the commercial efficiency of an integrated execution model that eliminates subcontractor margins.

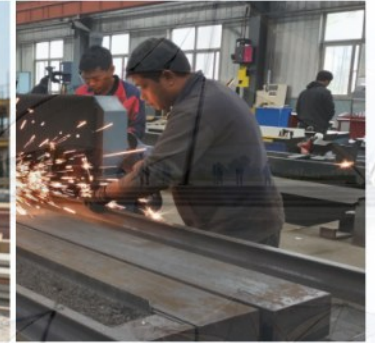
WHAT DRIVES THE NUMBERS

- Repeat client ratio exceeding 60% — proof of delivery confidence
- Sector diversification: commercial, institutional, industrial, hospitality, infrastructure
- Integrated model: no markup leakage to third-party designers or fabricators
- Pan-India branch network enabling local mobilisation with central QA oversight
- Fixed-price EPC contracts with milestone billing — predictable cash flow for both parties

COMMERCIAL ADVANTAGE FOR SPECIFIERS

When you specify Maasidhi, you engage a firm whose growth is built on performance, not leverage. Our commercial model rewards quality and speed — every project delivered on time strengthens the next mandate. Architects and consultants benefit from a partner whose financial stability ensures project continuity without mid-contract risk.

106% growth in a single year — earned through repeat mandates, sector expansion, and the commercial discipline of integrated execution.



INTEGRATED CAPABILITY PLATFORM

FOUR PILLARS OF DELIVERY

01 DESIGN & ENGINEERING

Form-finding, wind/snow load analysis (IS 875), connection design, membrane geometry generation, GA/fabrication/erection drawings. All engineering is fabrication-aware — every detail is drawn for production, not just approval. Structural coordination with architect's consultant ensures zero RFI loops at site.

02 FABRICATION & PATTERNING

In-house MS fabrication: CNC cutting, pipe bending, MIG/TIG welding, shot blasting, hot-dip galvanising coordination. Membrane patterning from analysis geometry with compensation factors. PVC/PTFE heat seaming on calibrated machines. Full traceability: MTCs, weld maps, NDT reports per joint.

03 INSTALLATION & AMC

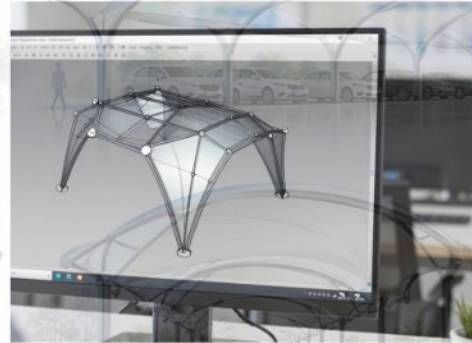
Erection methodology planning, crane/rigging calculations, pretension commissioning with load-cell verification, as-built survey. Post-handover: 5-year AMC covering membrane inspection, re-tensioning, drainage clearance, hardware replacement, and annual condition reporting.

04 EPC / TURNKEY CONTRACTING

Single-point responsibility from concept to commissioning. Fixed-price lump-sum or milestone-based billing. Programme ownership: we control the critical path. No design-bid-build fragmentation. Result: faster delivery, lower coordination cost, and guaranteed performance accountability.

Four capabilities, one contract, zero coordination gaps. The integrated model is why architects specify Maasidhi for complex geometry and tight programmes.

01 DESIGN & ENGINEERING



02 FABRICATION & PATTERNING



03 INSTALLATION & AMC



04 EPC / TURNKEY CONTRACTING

IN-HOUSE ENGINEERING

TECHNICAL AUTHORITY FOR SPECIFIERS

STRUCTURAL COORDINATION & ANALYSIS

Every project begins with structural logic. We perform form-finding for anticlastic and synclastic geometries, wind load simulation per IS 875 Part 3, snow and ponding checks, and seismic assessment where applicable. Load paths are resolved at concept stage — not discovered during fabrication. Our engineers coordinate directly with the architect's structural consultant to resolve interface conditions before drawings are issued.

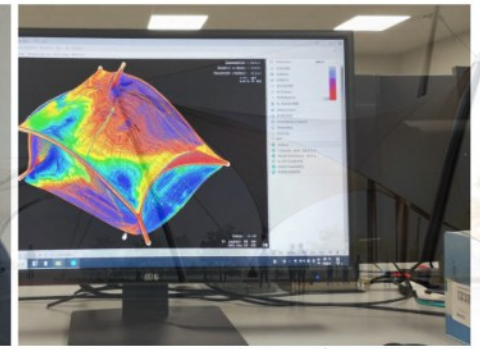
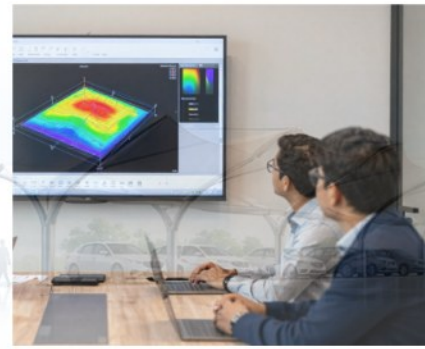
FABRICATION-AWARE ENGINEERING

Drawings are produced for production, not just approval. Every connection detail accounts for weld access, bolt torque sequence, galvanising clearance, and erection sequence. Membrane geometry is generated with compensation factors built in — panels are CNC-cut directly from analysis output, eliminating manual patterning error.

DRAWING CONTROL & INTERFACE RESOLUTION

Revision-controlled drawing registers with transmittal tracking. IFC (Issued for Construction) packages include GA, fabrication, erection, and membrane layout drawings. All interfaces — steel-to-membrane, steel-to-civil, membrane-to-drainage — are resolved in the model before site mobilisation. Zero ambiguity at handover.

When engineering is in-house and fabrication-aware, the gap between design intent and built reality disappears. That is the specifier's assurance.



IN-HOUSE MANUFACTURING PRODUCTION CAPABILITY & CONTROL

MILD STEEL FABRICATION

34,000 sq ft Delhi workshop equipped for structural steel fabrication up to 20-tonne assemblies. Capabilities include CNC plasma/oxy-fuel cutting, hydraulic pipe bending (up to 200mm NB), MIG/TIG/SMAW welding by coded welders (ASME IX / IS 9595), shot blasting to SA 2.5, and primer application. Every plate and section carries a Mill Test Certificate traceable to the heat number.

CNC CUTTING & PIPE BENDING

CNC plasma cutting ensures dimensional accuracy within $\pm 1\text{mm}$ on complex profiles. Hydraulic pipe bending with mandrel support delivers consistent radii without ovality or wall thinning — critical for mast and ring beam geometries. All bent sections are checked against templates before release to welding.

WELDING, INSPECTION & QA/QC

All critical welds are mapped and inspected per WPS/PQR. NDT regime includes UT, MPI, and DPT on load-bearing nodes. Dimensional inspection at each stage gate: cutting, fitting, welding, blasting. Final inspection with punch-list clearance before dispatch. Full QA/QC dossier — weld maps, NDT reports, dimensional records, MTC compilation — accompanies every consignment.

MARKING, PACKING & DISPATCH

In-house manufacturing is not a cost play — it is a quality, schedule, and traceability play. When fabrication is under our roof, every weld is accountable.

Every member is marked with unique piece ID, orientation, and erection sequence number. Packing is planned for transport and site unloading sequence. Dispatch is ERP-tracked with photographic evidence and delivery challan. Result: zero site confusion, no missing members, no rework due to mis-identification.



MEMBRANE PATTERNING & HEAT SEAMING FABRICATION TRACEABILITY & QUALITY

GEOMETRY-CONTROLLED PANEL DEVELOPMENT

Every membrane panel is developed from the 3D form-found surface using proprietary flattening algorithms that account for biaxial prestress, compensation ratios, and seam geometry. Panel boundaries are optimised for material yield, structural load path continuity, and site-erectable piece sizes. Cutting patterns are plotted full-scale on dedicated patterning tables (25m × 6m) and verified against the digital model before release to cutting.

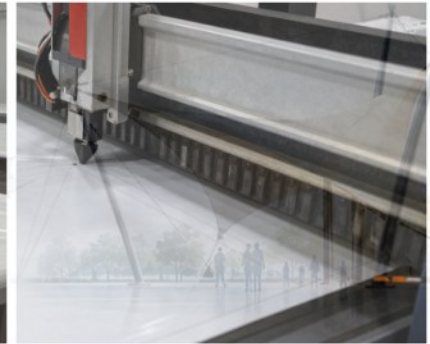
PVC HEAT SEAMING & SEAM INTEGRITY

Hot-air and hot-wedge welding at controlled temperature (480–620°C), speed, and pressure parameters validated per material supplier specifications. Every seam achieves minimum 80% of parent material tensile strength. Seam width, overlap, and edge distance are held to $\pm 2\text{mm}$ tolerance. Destructive peel tests on production coupons confirm weld quality at defined frequency. Result: verified waterproofing performance with zero field leakage history.

INSPECTION HOLD POINTS & RELEASE CONTROL

Fabrication follows a staged ITP with mandatory hold points: pattern verification, panel cutting sign-off, seam welding parameter log, destructive test clearance, dimensional check against 3D model, edge rope pocket inspection, and final visual/packaging review. No membrane leaves the facility without a signed release certificate and full traceability dossier linking every panel to its material batch, welder ID, and test records.

Patterning is where engineering meets craft. A 1% compensation error compounds across a 40m span — our process eliminates that risk at source.



TENSILE STRUCTURE FUNDAMENTALS ENGINEERING PRINCIPLES FOR SPECIFIERS

MEMBRANE TENSION & DOUBLE CURVATURE

Tensile membranes derive stiffness from prestress, not bending. Anticlastic (saddle-shaped) geometry ensures every point on the surface carries biaxial tension under all load cases—wind uplift, ponding, snow, and self-weight. This eliminates flutter, prevents water pooling, and delivers spans of 15–60m without intermediate supports. Form-finding via dynamic relaxation or force-density method guarantees equilibrium geometry before any material is cut.

EDGE RESTRAINT & ANCHORAGES

Boundary conditions define membrane behaviour. Cable edges, rigid beams, and catenary arcs each impose distinct stress distributions. Mast heads, ridge cables, and valley cables create the high and low points that generate curvature. Every anchorage is designed for the envelope of prestress + live load + temperature, with corrosion allowance and inspection access factored from concept stage.

PRETENSION & LOAD TRANSFER

Controlled pretension (typically 1–3 kN/m warp and weft) is applied during installation via corner plates, turnbuckles, or cable tensioners. Load paths flow from membrane through edge cables, into steelwork nodes, down masts or columns, and into foundations. Every connection is detailed for force magnitude, direction, and reversal—ensuring no joint sees compression it was not designed for. Double curvature is not decorative—it is the structural mechanism. Without it, a membrane is a sail waiting to fall.



TENSILE SYSTEM COMPONENTS**COORDINATED DETAILING & CONSTRUCTABILITY****MEMBRANE MATERIAL**

PVC-coated polyester (Ferrari, Mehler, Seaman) in 700–1400 GSM grades selected per span, load, and translucency requirement. PVDF or TiO₂ top-coat for self-cleaning and UV resistance. Material is batch-tested for tensile strength (warp/weft), tear propagation, and seam peel before acceptance. Fire rating to IS 11877 / BS 7837 / DIN 4102 B1 as specified.

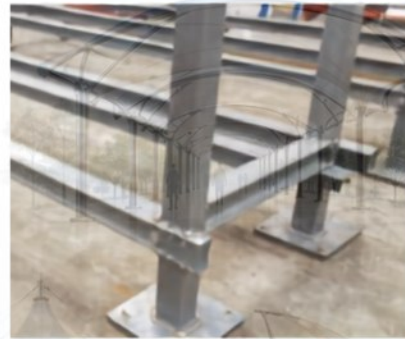
CABLES & FITTINGS

Spiral-strand or wire-rope cables in galvanised or stainless steel, sized for factored load plus 15% future re-tensioning margin. Swaged or spelter-socket terminations with proof-load certification. Toggle forks, jaw ends, and turnbuckles in drop-forged steel with hot-dip galvanising. Every fitting is load-rated and traceable to mill certificate.

STEELWORK & FOUNDATIONS

Hollow-section masts, ring beams, and perimeter columns fabricated to IS 800 / IS 816. Base plates, gussets, and stiffeners designed for combined axial, shear, and moment. Foundations — isolated footings, pile caps, or ground anchors — are designed for net uplift under wind reversal. Coordinated GA drawings ensure clash-free integration with civil and MEP.

A tensile structure is only as reliable as its weakest fitting. We detail, source, test, and trace every component in the load path.



TENSILE ROOFS & CANOPIES

Architectural Applications

ENTRANCE CANOPIES & WALKWAY COVERS

Custom-geometry entrance canopies deliver brand identity, weather protection, and wayfinding in a single element. Spars from 60m to 30m+ without intermediate columns, maintaining clean pedestrian flow. Integrated drainage via valley cables and scupper details eliminates pending. Walkway covers use repeated modular days for cost efficiency while maintaining architectural continuity across long circulation routes.

ATRIUMS, COURTYARDS & OPEN-AIR SHELTERS

Translucent membranes (6-15% light transmission) transform courtyards and atriums into daylight, rain-protected spaces without the thermal penalty of glass. Anticlastic form promotes natural ventilation at high points. Spars of 20-50m are nuthot, eliminating the forest of columns that conventional roofing demands. Ideal for institutional campuses, hospitality lobbies, food courts, and cultural venues.

DESIGN VALUE & COMMERCIAL IMPACT

Tensile canopies weigh 3-5kg/m² for conventional steel roofing — reducing foundation cost by up to 60%. Speed of erection (typically 40-60% faster than conventional) compresses programme and accelerates revenue. The sculptural form creates landmark identity that elevates property value and tenant appeal. Every canopy is engineered for 25-year design life with minimal maintenance.

A tensile canopy is not a shade structure — it is architecture that performs. Light, strong, fast to erect, and impossible to ignore.





PARKING & TRANSPORT

Shade, Shelter & Infrastructure Solutions

CAR PARKING SHADES & MULTI-BAY SYSTEMS

Tenseile car parking structures deliver clear spans of 10–30m per bay, eliminating intermediate columns that restrict vehicle circulation and door-opening clearance. Modular ridge-vault geometry allows indefinite linear extension. Integrated drainage channels prevent water cascade onto vehicles. UV-blocking membranes (>95% UV cut) protect paintwork and interiors. Designed for repeated thermal cycling, wind gusts, and 25-year service without re-skinning.

TRANSIT SHELTERS & BUS STOPS

Purpose-designed transit canopies for bus rapid transit, metro station forecourts, and intercity terminals. Clear-span coverage over passenger queuing areas with integrated signage zones, lighting conduits, and CCTV mounting provisions. Anticlastic form ensures self-cleaning drainage and eliminates ponding. Vandal-resistant detailing with concealed fixings and anti-climb profiles for public infrastructure durability.

DROP-OFF CANOPIES & TRANSPORT HUBS

Porte-cochère and drop-off canopies for hospitals, malls, airports, and townships. Minimum 5.5m clear height for ambulance/bus access. Spans up to 25m without columns in the vehicle path. Drainage routes to perimeter downpipes away from pedestrian zones. Signage integration, up-lighting provisions, and brand colour membrane options available. Designed for heavy vehicle vibrations, exhaust exposure, and continuous public use.



SPORTS & RECREATION

High-Occupancy Shade & Shelter Solutions

STADIUM ENTRANCES & SPECTATOR SHELTERS

Large-span tensile canopies at stadium entrances manage crowd circulation under weather-protected zones with clear sightlines to wayfinding signage. Anticlastic membrane geometry ensures positive drainage away from spectator movement paths. Spans of 15–40m eliminate columns in high-density pedestrian flow areas. Pretensioned cable-styled systems resist wind uplift during open-air events. Integrated lighting troughs and PA conduits reduce secondary steelwork.



SPORTS COURTS & SWIMMING POOL ENCLOSURES

Court covers and pool enclosures deliver UV Filtration (+95% cut), controlled ventilation, and glare-free diffused light for player comfort. Ridge-valley geometry with integrated gutter channels manages monsoon runoff without pooling. Structural coordination with sports lighting masts, scoreboard, and perimeter fencing. Pool enclosures incorporate collision-resistant detailing of chlorinated environments. Designed for 25-year material life with minimal maintenance intervention.

SPORTS INFRASTRUCTURE

Recreation covers for club facilities, outdoor gyms, and multi-purpose courts. Architecturally expressive forms enhance facility identity while providing all-weather usability. Load paths resolved through mast-and-cable systems allowing column-free spans over activity areas. Anchorage details coordinated with landscape and hardscape. Fabric selection balances transparency, acoustic damping, and long-term serviceability under sand, humidity, and use demands large spans, crowd safety, and visual drama. Tensile structures deliver all three — with drainage certainty, low maintenance, and lifecycle value that justifies the investment.

EDUCATIONAL & INSTITUTIONAL

Public-Sector Shade & Shelter Infrastructure

SCHOOL CORRIDORS & PLAYGROUNDS SHELTERS

Covered walkways and corridor canopies connecting classroom blocks provide continuous weather protection for students and staff. Clear spans of 6–15m over circulation paths eliminate columns in high foot-traffic zones. Membrane transparency delivers natural daylight while blocking >90% UV. Playground shelters with anticlastic geometry ensure positive drainage away from play surfaces. Vandal-resistant concealed fixings and anti-climb profiles ensure public-safety compliance and long-term durability under intensive daily use. Large-span courtyard canopies for universities and colleges create shared gathering zones for 500–2000 occupants. Cable-stalled mast systems deliver column-free spans up to 30m, preserving solutions for assembly and convocations. Pretensioned membrane geometry resists monsoon wind loads and ensure self-cleaning drainage. Structural coordination with AV systems, stage lighting, and emergency egress routes. Institutional identity enhanced through sculptural form and brand-colour fabric selection. Entrance canopies at hospital and institutional entrances with minimum 5.5m clear height for ambulance access. Spans up to 25m without intermediate columns in the vehicle path. Integrated drainage rooted to permitper downgays away from patient drop-off zones. Signage integration, up-lighting provisions, and wayfinding coordination. Designed for continuous public use, heavy vehicle vibration, and 25+ year maintenance-free performance in warm tropical coastal conditions. Our tensile systems deliver architect-grade aesthetics with tensile plastic deiour antirevolutionary layouts in vulture-like public-sector robustness — engineered for high foot monsoon drainage, and zero-compromise safeg, from: zero-compromise safety.



Functional Infrastructure for Operations & Logistics

Cantilevered and portal-frame canopies spanning 12–24m over loading docks and material storage yards. Designed for forklift and crane access with minimum 6m clear height under the lowest structural member. Load paths engineered for wind uplift, live load from suspended hoists, and seismic drift. Positive-fall drainage with concealed gutters prevents water ingress into storage zones. Hot-dip galvanised MS frames with bolted splice connections enable rapid erection without disrupting adjacent production. Full structural coordination with deck levellers, roller shutters, and conveyer alignments. Clear-span warehouse structures from 18m to 45m using lattice truss or portal systems. Column-free interiors maximise racking density and forklift manoeuvrability. Roof geometry optimised for natural ventilation via ridge vents and controlled daylighting through translucent panels. Structural design accounts for sprinkler dead loads, mezzanine reactions, and future crane runway provisions. Fabrication traceability through weld maps, MTC documentation, and NDT reports. Fast-track installation—typical 2000+ sqm shelling erected in 18–25 days. Production-line extensions, QC shelters, transformer yard canopies, and ETP canopies engineered for operational continuity. Structural coordination with process piping, cable trays, and equipment access hatches. Low-maintenance coatings (spony primer = Pü topcoat) rated for chemical and thermal exposure. Modular bolt-together frames allow future reconfiguration and relocation. Passive design fundamentals with exterior insulation specific to local climate and solar orientation. Pre-engineered solutions with performance warranties backed by precise AMC and commissioning documentation.



MALL ENTRANCES & RETAIL FORECOURTS

Architecturally distinctive entrance canopies spanning 15–30m over mall frontages and retail forecourts. Hyperbolic and conical membrane geometries create landmark identity visible from arterial roads. Structural coordination with glazed curtain walls, revolving doors, and façade cladding systems. Signage zones and brand-lighting provisions integrated into steel mast profiles. Pretensioned membrane ensures positive damage away from pedestrian movement paths. Wind-tunnel validated geometry for high-rise canyon effects in urban retail districts. Anchorage systems designed for facade-mounted or independent foundation options.

RESTAURANT TERRACES & HOTEL DROP-OFFS

Al-fresco dining canopies and porte-cochère structures for 4- and 5-star hospitality properties. Membrane translucency calibrated for ambient daylight without solar glare on dining surfaces. Minimum 5.5m clear height at hotel drop-offs for luxury coach and SUV access. Integrated up-lighting, pendant fixtures, and heating provisions coordinated with MEP consultants. Rain-screen detailing interior zero water splash back onto guest areas. Fabric colour and form selected in coordination with interior designers and brand guidelines. High-footail durability rated for 25-year membrane life with scheduled AMC.

EVENT AREAS & HOSPITALITY FEATURE STRUCTURES

Sculptural tensile pavilions for poolside lounges, banquet pre-function areas, and outdoor event lawns. Cable-stayed mast systems deliver column-free spans up to 25m for unobstructed sightlines. Geometry engineered for acoustic performance and controlled microclimate beneath the canopy. Modular connection details allow seasonal reconfiguration or temporary extension for large events. Full QA/QC documentation including lead test certificates, weld maps, and fabric tensile test reports. Commissioning includes pretension verification, drainage flow test, and snag-free handover to facility management.

Retail and hospitality clients demand structures that elevate brand perception, protect guest experience, and integrate seamlessly with architectural facades. Our specification-ready approach delivers landmark geometry, lighting coordination, and consultant-friendly documentation from concept through commissioning.

Premium Commercial Experience Structures

Amenity-Led Shelter & Landscape Structures

Sculptural canopies over clubhouse entrances, swimming pool decks, and rooftop terraces in premium residential developments. Anticlastic membrane geometry ensures positive drainage and self-cleaning performance. Spans of 10–20m with slender tubular steel masts maintain visual lightness appropriate to residential aesthetics. Fabric transparency provides diffused daylight while blocking UV and reducing heat gain. Structural coordination with waterproofing membranes, planter loads, and terrace Falling system's Colour and l'morn curated in collaboration.

Falling systems: Colour ahead project stakeholders with landscape architects and project stakeholders/owners. Gated townships. Clear spans up to 10m eliminate coi mono paying surfaces. Membraned impact valescape rours from playing surfaces. Membrane geometry validated for mm playing surfaces. Membrane geometry validated for mansion wind loads and halstone impact. Drainage sumosan. Vandalism is a serious threat to public safety, so must profiles for uninfusibility safety. Modular toundrums most profiles for community safety. Modular foundation designs allows instalmenting handwelp short-term, and without disrupting existing tannosan, car rank zoogle stalkway connectors, gate canopies, car-park shibos apartment complexes. Consistent design language and maintained across multiple structures within a single membrane, paraison is adaptable without dismantling zil



Maasidhi Catalysts delivers engineered roofing solutions and structural systems built for performance.

Our spectrum from architecturally expressive tensile membrane roofs and lightweight shade structures to complex industrial roofing systems that combine functionality and optimized performance.

Engineered for strength, longevity, and weather-resistance, our systems ensure reliable protection while enhancing the aesthetic and operational value of any facility. Every project is executed with precision — from design and fabrication to installation and final commissioning.

- **Tensile Structures:** Tensioned membrane roofs, shade canopies, and architectural fabric structures for commercial, public, and industrial spaces.
- **Industrial Roofing:** Metal sheet roofing, standing seam systems, and insulated panels for factories, warehouses and logistic buildings.
- **Structural Solutions:** Space frames, trusses, purlins, skylights, and ventilation systems.
- **Accessories & Systems:** Rainwater drainage, edge flashings, gutters, insulation, and safety systems.
- **Design & Engineering:** Customized design, structural analysis, and detailing for optimal performance across building typologies.



STRUCTURAL STEELWORK

MS Fabrication | Trusses & Masts | Connection Assemblies

Maasidhi Catalysts operates a fully equipped MS fabrication facility delivering structural steel components to approved drawings, material specifications, and weld procedures. Our capability spans masts, trusses, beams, bracket, base plates, gussets, and complex connection assemblies for tensile structures, industrial buildings, and infrastructure projects across India.

- Fabrication to IS 800 / IS 816 with documented WPS & PQR
- Dimensional tolerances per IS 7215 & project-specific specs
- UT, MPI & DPT weld inspection as per approved ITP
- Component marking & traceability from mill cert to dispatch
- Trial assembly & site fit-up verification before dispatch
- Safe erection methodology with lifting plans & TBTs

Key Strengths

Single-point fabrication accountability • In-house CNC cutting, drilling & bending • Qualified welders with ASNT/ISNT certification • Full traceability: heat number to final coat • Capacity: 300+ MT/month across facilities



PEB & INDUSTRIAL SHEDS

Warehouses | Factories | Workshops | Storage Facilities



PEB & INDUSTRIAL SHEDS

Warehouses | Factories | Workshops | Storage Facilities

Maasidhi Catalysts delivers pre-engineered buildings and industrial sheds with single-point accountability across design, fabrication, erection, roofing, and civil works. Our PEB solutions offer clear spans up to 60m, rapid erection cycles, efficient structural envelopes, and future expansion provisions — ideal for warehouses, manufacturing plants, workshops, and logistics facilities.

- Clear spans up to 60m without intermediate columns
- Design-to-erection cycle: 8-12 weeks typical
- Insulated sandwich panels for thermal performance
- Ridge & turbo ventilators for natural air movement
- Future expansion with bonded connections & modular bays
- Integrated civil, roofing, MEP & fire protection scopes

Key Strengths

Speed of delivery • Low maintenance lifecycle • Efficient material utilisation • Ventilation & insulation coordination • Single-window accountability across all trades • Pan India erection capability



CIVIL & MECHANICAL

Foundations | Anchorages | Site Infrastructure | Equipment Supports

Maasidhi Catalysts executes integrated civil and mechanical works that form the critical interface between structure and ground. Our teams deliver foundations, pedestals, anchor bolt assemblies, drainage systems, paving, equipment plinths, and service interfaces — ensuring load transfer integrity, operational clearances, and dependable site readiness for structural erection.

- RCC foundations designed for tensile uplift & lateral loads
- Precision anchor bolt setting with template-controlled tolerances
- Drainage design coordinated with finished levels & slopes
- Equipment plinths with vibration isolation provisions
- Service trenches, cable routes & utility coordination
- Paving interfaces with expansion joints & load ratings



Key Strengths

Integrated civil-mechanical execution • Reduced interface delays • Buildability-focused detailing • Operational clearance compliance • Utility coordination across MEP trades • Site readiness for structural erection

EPC & TURNKEY CONTRACTING

Engineering | Procurement | Fabrication | Erection | Commissioning

Maasidhi Catalysts operates as a full-service EPC contractor for tensile structures, industrial buildings, and infrastructure projects. We deliver end-to-end from concept engineering through procurement, fabrication, logistics, erection, and commissioning — eliminating interface gaps, compressing programme durations, and providing single-point accountability to architects, developers, and project owners.

- Single-point accountability from design to handover
- Disciplined programme management with milestone tracking
- Approved shop drawings, material submittals & method statements
- In-house fabrication with full QA/QC traceability
- Safe erection with certified lifting equipment & trained crews
- Commissioning, snag resolution & O&M documentation



Key Strengths

Elimination of interface gaps • Compressed delivery programmes • Disciplined site management with daily reporting • Approved documentation packages • Handover readiness with as-built records • AMC & lifecycle support

Enquiry & Technical Brief



SITE DATA CAPTURE & REQUIREMENTS DEFINITION

Every project begins with a structured intake: site location, plan dimensions, intended usage, structural expectations, access constraints, drainage conditions, wind exposure, and aesthetic objectives are captured systematically. Our technical team validates the brief against feasibility parameters, confirms scope boundaries, exclusions, deliverables, programme milestones, and approval pathways — ensuring nothing is assumed and every requirement is documented before design commences.



SURVEY REVIEW & PRELIMINARY FEASIBILITY

Architectural drawings, topographical surveys, geotechnical reports, and site photographs are reviewed in detail. Interface conditions with existing structures, underground services, overhead clearances, and vehicular access are identified early. Preliminary feasibility is assessed for span, height, anchorage strategy, and material selection — enabling fast, informed response to the client within 48 hours of enquiry receipt.



BRIEF VALIDATION & FAST RESPONSE

The validated brief is circulated internally with a preliminary scope note, budget indication, and programme outline. Key coordination points — consultant interfaces, statutory approvals, site mobilisation constraints — are flagged upfront. Clients receive a structured response with concept direction, commercial framework, and next-step recommendations, establishing a clear and accountable delivery framework from day one.



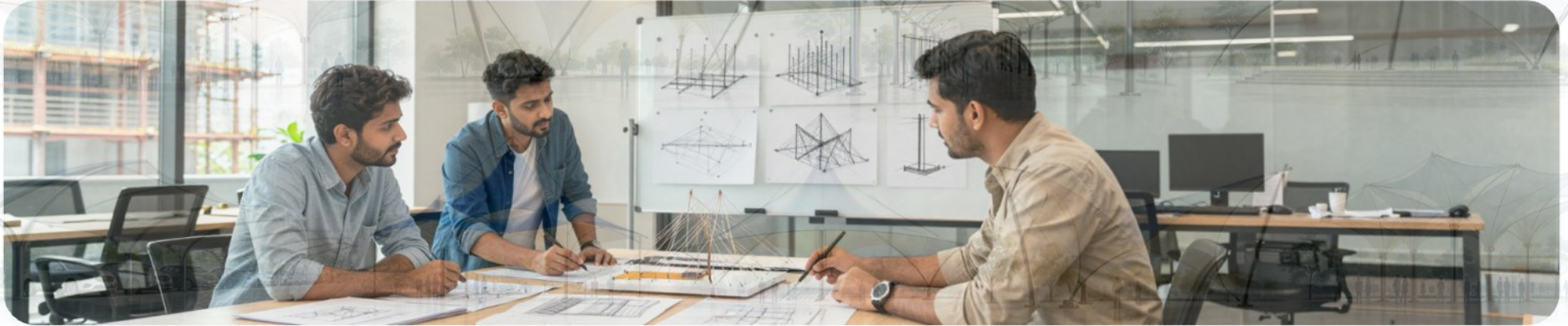
Concept Development

STRUCTURAL CONCEPT & ARCHITECTURAL LANGUAGE

Design direction is established through rigorous evaluation of spreading options, mast placement, edge conditions, support strategy, curvature profiles, and constructability. Each concept is developed as a complete structural proposition — integrating lead path logic, material efficiency, drainage fall, and visual intent into a coherent architectural language that satisfies both engineering performance and client aspiration.

MULTI-OPTION EVALUATION & PERFORMANCE RANKING

Multiple concept directions are developed in parallel and evaluated against structural efficiency, fabrication complexity, installation feasibility, programme impact, and commercial fit. Mast heights, cable geometry, edge restraint conditions, and foundation implications are compared quantitatively. The preferred option is selected through a transparent scoring matrix shared with the client and design consultants.



CONSTRUCTABILITY & COMMERCIAL ALIGNMENT

Every concept is stress-tested for site buildability: crane access, lifting sequences, temporary works, and phased installation are considered from the outset. Commercial implications — material quantities, fabrication hours, transport logistics, and erection duration — are mapped against budget and programme to ensure the chosen direction is both architecturally compelling and commercially deliverable.

Structural ENGINEERING & DESIGN

FORM, LOAD & MEMBER SIZING

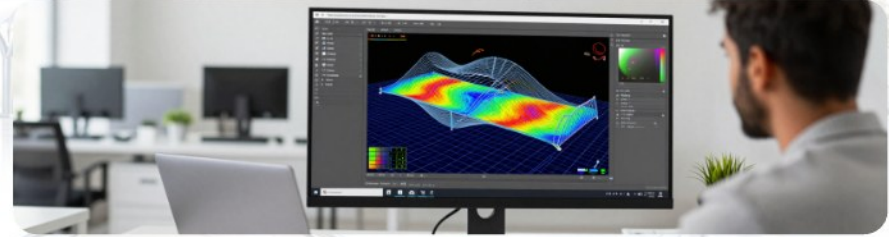
Membrane form, pretension distribution, wind uplift, rain pooling, dead load, and imposed load conditions are assessed through non-linear analysis. Member sizing is for masts, beams, cables, and connections is derived from serviceability and ultimate limit state checks. Deflection limits, frequency response, and stability under asymmetric loading are verified to produce a fully coordinated, approval-ready engineering solution.

CONNECTION LOGIC & DESIGN COORDINATION

Steelwork, cables, foundations, membrane attachments, drainage interfaces, and architectural detailing are resolved through a single integrated engineering workflow. Connection design addresses load transfer, tolerance absorption, thermal movement, and maintenance access. Every interface is coordinated across disciplines — structural, architectural, mechanical, and civil — eliminating field conflicts before fabrication release.

APPROVAL-READY DOCUMENTATION & TRACEABILITY

Design basis reports, structural calculations, wind analysis summaries, and submission drawings are issued in revision-controlled packages. All documentation is traceable from bad assumptions through member verification to connection capacity — providing consultants, clients, and statutory authorities with a clear, auditable engineering record aligned with IS 800, IS 875, and relevant international codes.



Drafting &

CONSTRUCTION DOCUMENTATION

DRAWING PACKAGE & GA PREPARATION

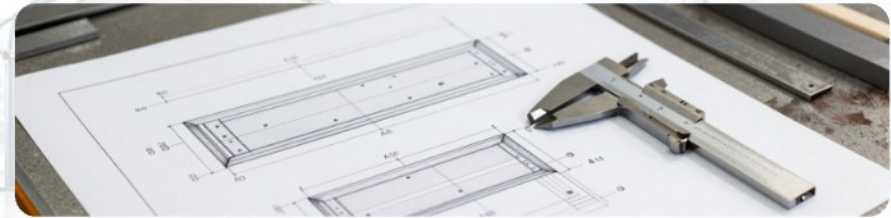
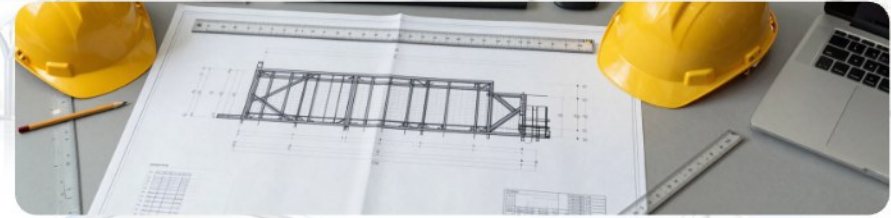
General arrangement drawings, fabrication details, erection sequences, connection schedules, membrane layouts, and foundation setting-out are prepared as a coordinated package. Every drawing is dimensionally verified against structural calculations and site survey data. Material take-offs, bolt schedules, and weld specifications are embedded within the documentation to enable seamless procurement and workshop planning.

FABRICATION DRAWINGS & INSTALLATION SEQUENCES

Shop drawings are issued with full dimensional control — tolerances, hole patterns, weld preparations, surface treatment zones, and piece-mark identification. Installation sequence drawings define lifting points, temporary bracing, alignment procedures, and torque specifications. Each drawing set is cross-referenced to the erection method statement, ensuring site teams have unambiguous, execution-ready information at every stage.

REVISION MANAGEMENT & ISSUE CONTROL

Strict revision control is maintained through design development, approval cycles, and construction phases. Drawing registers, transmittal logs, and supersession records ensure only current-issue documents reach the workshop and site. Final as-built drawings, membrane layouts, connection mark-ups, and QA records are compiled into the project handover dossier for client reference, lifecycle maintenance, and future modification planning.



Patterning & MEMBRANE ENGINEERING

3D FORM TO FLAT PANEL PATTERNS

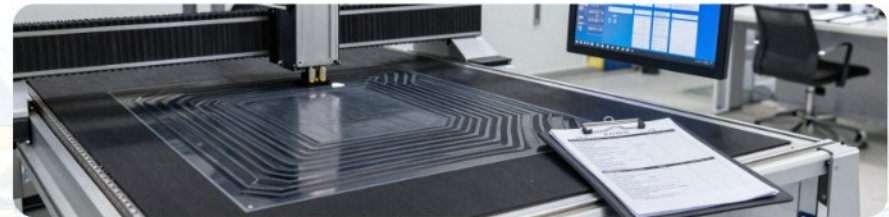
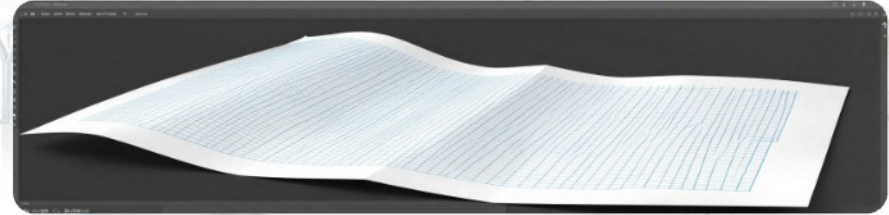
Engineered three-dimensional membrane surfaces are unfolded into precise flat panel patterns using specialist software. Gaussian curvature, pretension vectors, and material stretch characteristics are fully accounted for in the flattening algorithm. Compensation factors — warp and weft — are applied per panel to ensure the installed membrane achieves target geometry and stress distribution without wrinkles, bonding, or overstress at seam lines.

SEAM DIRECTION & EDGE REINFORCEMENT

Seam layout is engineered for structural continuity, drainage fall, and visual alignment. Edge Reinforcement — keder ropes, webbing belts, catenary cables, and plate attachments — is detailed for each boundary condition. Panel widths are optimised against roll width to minimise waste while maintaining seam strength. Every panel is validated against wind uplift, snow load, and ponding criteria before cutting file release to the fabrication floor.

CUTTING OPTIMISATION & FABRICATION COMPATIBILITY

Finalised cutting files are nestled for material efficiency and issued with seam schedules, edge detail drawings, and QC check sheets. Traceability is maintained from approved pattern geometry through CNC cutting, heat seaming, and edge finishing to final membrane delivery on site. Compatibility with PVC, PTE, ETFE, and HDPE substrates is confirmed at pattern stage, ensuring the digital geometry translates into accurate, installable membrane output every time.



PRECISION CUTTING & COMPONENT FABRICATION

All structural steel is fabricated strictly to approved-for-construction drawings with dimensional tolerances per 15 7215 and project specifications. CNC plasma and oxy-fuel cutting ensure clean edges and accurate profiles. Fit-up is verified against shop drawings before tack welding commencements. Weld procedures are pre-qualified, at one very joint is executed by coded welders under controlled parameters. Component identification heat numbers, piece marks, and batch traceability is maintained from raw material receipt through finished assembly, ensuring full audibility at every production stage.

MEMBRANE HEAT SEAMING & SEAM INTEGRITY

PVC and PDF of membranes are heat-seamed using calibrated hot-air and hot-wedge machines under controlled temperature, speed, and pressure parameters. Seam width, overlap, and weld penetration are verified against manufacturer specifications and project QA plans. Destructive peel tests are conducted at defined intervals to confirm seam strength exceeds permitted tensile capacity. Edge Reinforcements wider ropes, webbing, and plate pockets are integrated during seaming with positional accuracy to ± 2 mm, ensuring field installation proceeds without rework or adjustment.

MARK-INSPECT PACK & DISPATCH DISCIPLINE

Every fabricated component and seamed membrane panel is marked with unique identification, inspected against the approved checklist, and clearly by QC before packing. Steel members receive corrosion protection hot-dip galvanising or specified paint systems with DFT verification recorded per pace. Membrane panels are folded per depayment sequence, wrapped in protective sheeting, and labelled for site identification. Dispatch is sequenced to match the erection programme, ensuring clean handoff to logistics with zero ambiguity on site.

Fabrication & Heat Seaming



INSPECTION & TESTING REGIME

Every production stage is governed by a structured inspection and test plan (ITP) aligned to project specifications and IS/ISO standards. Material receipt checks confirm mill certificates, heat numbers, and grade compliance before stock enters the Fabric line. Dimensional verification at fit-up, weld visual and NDT Inspection (UT/MP) as specified, seam peel testing for membranes, and coating DFT measurement are executed at hold points with documented sign-off. Non-conforming material is quarantined, disposed, and recorded — only conforming components proved to the next stage.



Quality Control & Assurance

DOCUMENTATION CONTROL & TRACEABILITY

Full traceability dossiers are maintained per project: material test certificates, welding procedure qualifications, welder performance records, inspection reports, seam test results, coating records, and certification certificates are compiled into a controlled document pack. Drawing revision control ensures fabrication proceeds only against the latest approved-for-construction issue. Document transmittals, RFI, and NCR registers are maintained digitally with audit-ready retrieval capability.



CONTROLLED RELEASE & FINAL CLEARANCE

Components are released for dispatch only upon completion of all ITP hold-point sign-offs, resolution of any open NCRs, and verification of marking, protection, and packing compliance. A formal release note accompanies each consignment confirming inspection status, coating system, identification, and transport-readiness. This controlled release discipline eliminates rework on site, protects programme certainty, and delivers full confidence to the client and their consultants that every item arriving on site is fit for purpose.



Every Maasidhi project follows a controlled logistics and mobilisation protocol that ensures components arrive in installation sequence, site conditions are verified, and all stakeholders are aligned before erection begins. This eliminates idle crane time, reduces double-handling damage, and compresses the on-site programme.

Packing & Transport Sequencing

- Components tagged, bundled, and loaded in reverse-erection order
- Protective wrapping for galvanised steelwork and memmora panels
- Oversize/OCC route surveys and permits secured in advance
- GPStracked consignments with real-time delivery ETAs
- Unloading sequence matched to crane swing radius and laydown area & Mobilisation

Foundation Readiness Verification — bolt patterns, levels, plum

- Access road and laydown area confirmation
- Permit-to-work, safety induction, and TBT documentation
- Crane pad preparation and ground-bearing capacity check
- Stakeholder alignment meeting • client, PMC, contractor, Maasidhi

Equipment mobilisation schedule locked 7 days prior

Schedule/Drew: Our logistics protocol guarantees zero idle-equipment days. Every delivery is sequenced to the erection plan • components arrive when the crane is ready, not before.

LOGISTICS & SITE READINESS

Disciplined Delivery System



Maasidhi's verification methodology is governed by approved method statements, lifting plans, and real-time weather monitoring. Every operation — from first column to final membrane tensioning — follows a controlled sequence that ensures temporary stability, geometric accuracy, and zero rework at handover.

Steelwork & Cable Installation

- Safe work zone demarcation and exclusion barriers
- Safe lifting plan — load charts, radius checks, rigging inspection
- Column plank and base-plate alignment to $\pm 1\text{mm}$ tolerance
- Temporary bracing and guy-wire stabilisation during erection
- Cable installation with calibrated turnbuckle pre-load
- Surveyor verification at each stage—before proceeding
- Weather window confirmation — wind speed $< 15\text{ km/h}$ for deployment
- Controlled unfolding with tag lines to prevent snag damage
- Progressive tensioning per engineered pretension schedule
- Load-cell monitoring at critical anchor points
- Final geometry check against design model coordinates
- Finishing: edge trims, drainage spouts, lighting brackets
- Zero-Rework Commitment: Method statements, stage gate inspections, and real-time survey control ensure the structure is right-first-time — no remedial works, no programme overruns.

INSTALLATION & E

Precision Field Execution



Handover is not simply project completion; is the formal transfer of a verified, documented, and warranted asset to the client. Maasidhi's commissioning protocol ensures every weld, every seam, every tension value, and every bolt torque is recorded, inspected, inspected, and signed off before the structure enters service.

Inspection & Punch-List Closure

- Final geometry survey – comparison against design model
- **Scam Integrity Inspection (visual + spark test on critical joints)**
- Torque verification on oil boiled connections
- Tension records on every cable and membrane anchor
- Punch-list walloughs with client/PMC – open items at handover

Documentation within 48 hours of identification

- Air-bug drawings (AutoCAD + PSTR) with real-time master-to-order
- Complete QA/Q: dossier MCTs, well maps, NDT reports, tension log

Operation & Maintenance manual – cleaning, inspection schedules

- Warranty certificates: structure (10 yr), membrane (15 yr), hardware (5 yr)

AMC proposal for preventive lifecycle management

LIFECYCLE VALUE:

Every Maasidhi handover includes a complete asset file – enabling the client's facility team to maintain, inspect, and extend the structure's service life with full traceability back to original design intent.

COMMISSIONING & HANDOVER **Formal Close-Out & Life Cycle Assurance**



A tensile structure is a long-life asset — but only when supported by scheduled inspection, preventive maintenance, and proactive component management. Maasidhi offers comprehensive Annual Maintenance Contracts that protect safety, appearance, and asset value across the full service life of every installation.

Scheduled Inspection Scope

Membrane panel condition grading & photographic reporting
Steam integrity checks — visual and instrument-based
Steelwork corrosion assessment & coating condition review
Cable tension measurement & adjust
Hardware & fitting torque verification
Drainage interface clearance & flow testing
– Foundation anchorage inspector & bolt condition
Professional membranous cleaning (non-abrasive, pri-neutral)
– Seam re-sealing & localised patch welding
Cable tightening & tumbouck service
Hardware replacement — shackles, clamps, ridge cables
Anti-corrosion coating touch-up on steelwork
Drainage channel clearance & downpipe flushing
Proactive replacement planning with budgetary forecasts

AMC Value: Structured lifecycle management extends service life by 30-50%, reduces emergency call-outs, maintains warranty validity, and preserves the architectural intent of the original design.

MAINTENANCE & AMC

Lifecycle service



Masidhi delivers measurable commercial advantage by consolidating design, engineering, fabrication, and installation under one accountable entity. This eliminates interface risk, compresses procurement timelines, and gives architects and developers a single point of technical responsibility from enquiry through to final handover and lifecycle support.

One Integrated Partner — Enquiry to Handover

Single-source accountability across concept, engineering, fabrication, erection, and commissioning. Faster decision cycles, reduced coordination overhead, and contractual clarity at every stage.

Responsive Pricing Backed in House Capability

With design, CNC, MS fabrication, pipe bending, patterning, and heat seaming all-in-house, we control cost at source. Value engineering is embedded in every proposal — not an afterthought. Schedule every follows naturally from production control.

Pan India & Nepal Coverage — 13 Branch Locations

Regional presence across Delhi, Palwal, Gwalior, Lucknow, Rajpur, Uctack, Nagpur, Hyderabad, Visakhapatnam, Chena, Bengaluru, Emaskalum, and Chhattisgarh ensure local mobilisation, rapid site response, and project continuity regardless of geography.

Timelines, transparent pricing, schedule certainty, and a single technical partner accountable from first enquiry to post-handover maintenance.

COMMERCIAL VALUE

One Integrated



PROJECT DELIVERY

Service Reach & Regional Network

With 13 branch locations across India and Nepal, Maasidhi brings engineering, fabrication, and execution closer to every project site — ensuring rapid mobilisation, local coordination, and uninterrupted delivery regardless of geography.



Pan India & Nepal Coverage

- Local mobilisation within 46–72 hours from nearest branch
- Regional site response teams with project continuity protocols



Branch-network support for material staging and logistics

- Site coordination through dedicated regional project managers



Engineering, fabrication, and execution brought closer to site

• 13 Branch Locations

Delhi • Palwal • Gwalior • Lucknow • Raipur • Cuttack • Nagpur • Vishnupathnam • Chennai • Bengaluru • Emakulam • Chhattishgarh

“

Delivery Promise: One company, one contract, one accountable team • from your city to your site, with full engineering and fabrication capability mobilized locally.



ENQUIRY APPOINT WITH CONFIDENCE

Whether you are an architect specifying tensile forms, a developer planning roofing infrastructure, or a project owner seeking a single source EPC partner — Maasidhi is ready to respond with technical clarity, competitive pricing, and full project accountability.

We Welcome Enquirers For

- Tensile & membrane structures
- Roofing systems & canopies
- Structural steelwork & fabrication
- Pre-Engineered Buildings (PEB) & industrial sheds
- Civil & mechanical works
- EPC & turnkey contracting

Reach Us Directly

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Phone

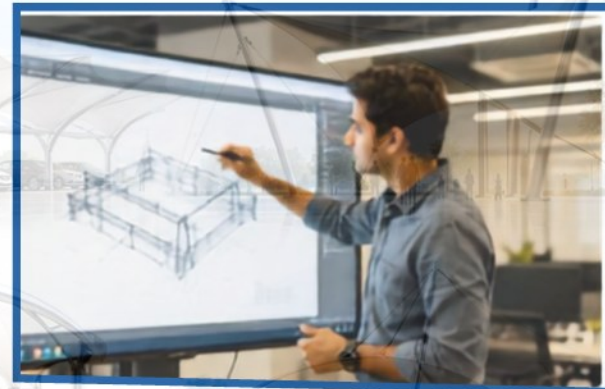
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Maasidhi Catalysts
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Your Vision, Our
Foundation

Engineering
structures.

Building confidence.

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