PROJECT INTELLIGENCE

Structural Analysis & Construction Report

Comprehensive risk, cost, and schedule assessment generated by StructuraAI's automated analysis pipeline.

RISK SCORE	BUILDABILITY	PROJECT BUDGET	REPORT DATE
69.89	54.47/100	■0.1L	01 Mar 2026
High Risk	Constructability Index	Total Estimated Cost	10:27 IST

Report Section	Description
01 — Executive Summary	Key metrics, risk classification, buildability overview
02 — Cost Intelligence	Budget breakdown, Monte Carlo simulation, NPV/IRR
03 — Schedule Analysis	Phase Gantt, cashflow projection, critical timeline
04 — Risk Assessment	Risk radar, phase-level risk matrix, mitigations
05 — Resource Utilisation	Material quantities and crew allocation

Prepared by: StructuraAI Automated Analysis Engine · **Classification:** Confidential · **Valid Until:** 30 days from generation

1 EXECUTIVE SUMMARY

Metric	Value	Status
Overall Risk Score	69.89 / 100	HIGH
Buildability Score	54.47 / 100	REVIEW
Total Project Cost	■6,791	BASELINE
Cost Contingency (P90)	■8,489	+25% BUFFER
Expected Duration	18 days	SCHEDULED

Insight: The project carries a **High risk profile** with a score of 69.89/100. Buildability index of 54.47/100 indicates moderate complexity — enhanced supervision recommended.

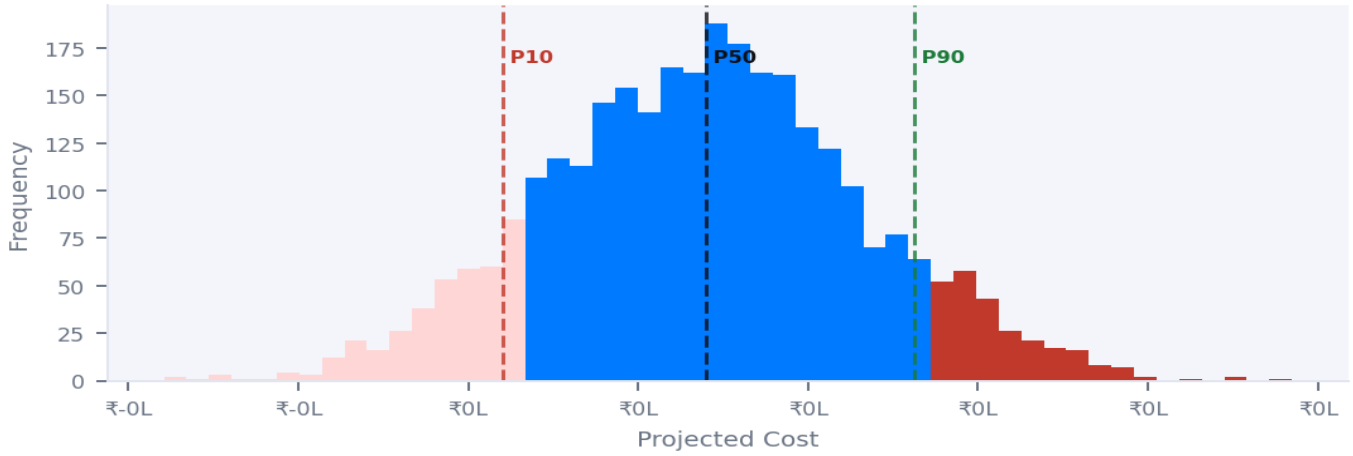
Cost Breakdown by Category

Category	Amount (■)	% of Total
Foundation & Substructure	■1,222	18.0%
Structural Frame	■1,494	22.0%
External Envelope	■951	14.0%
MEP Services	■1,358	20.0%
Internal Fit-out	■815	12.0%
Preliminaries	■543	8.0%
Contingency	■407	6.0%
TOTAL	**■6,791**	**100.0%**

2 COST INTELLIGENCE

NPV (10% DISCOUNT)	IRR	ROI	PAYBACK
■0.0L	25.0%	25.0%	10 mo
Net Present Value	Internal Rate of Return	Return on Investment	Estimated Payback

Cost Risk Simulation — Monte Carlo (3,000 runs)

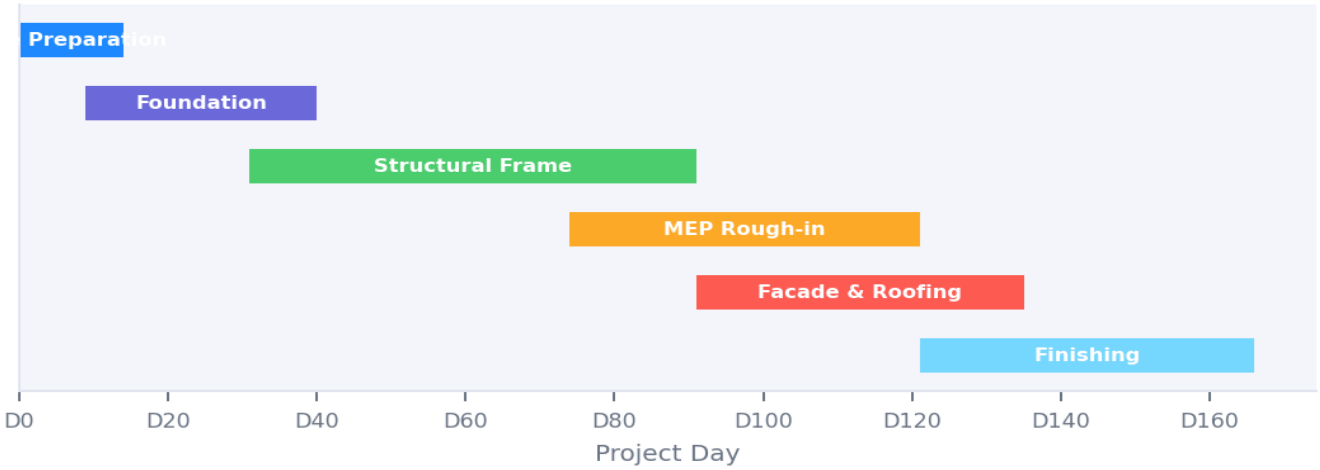


Distribution of projected costs across 3,000 simulated scenarios. Red = P10 (best case), Blue = P50 (median), Green = P90 (worst case).

Percentile	Projected Cost	Delta vs Baseline	Recommendation
P10 (Optimistic)	■797	-88.3%	Best-case scenario
P50 (Median)	■6,815	+0.4%	Planning baseline
P90 (Pessimistic)	■12,966	+90.9%	Reserve funding buffer

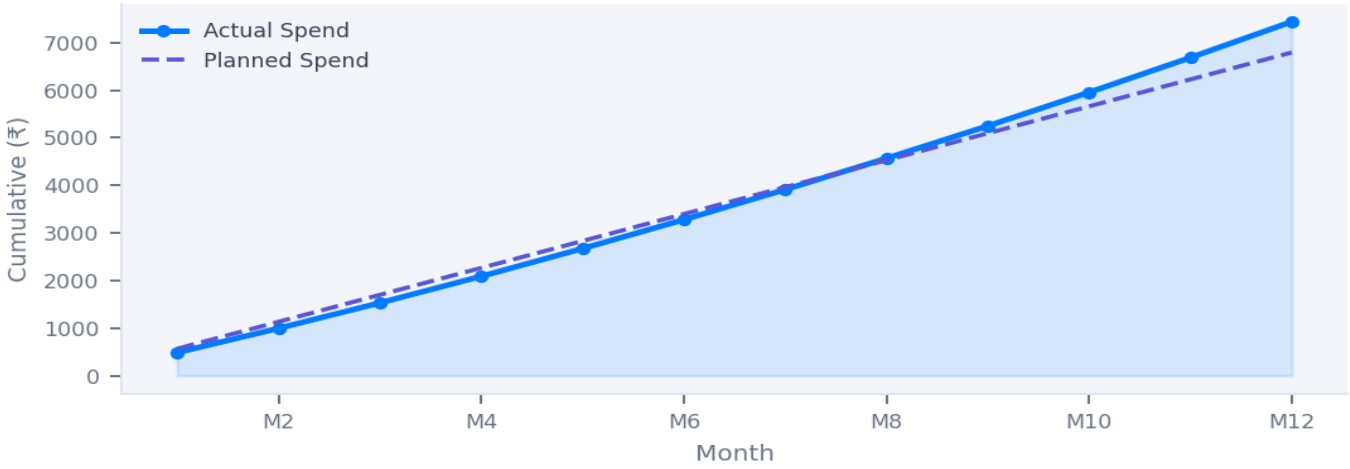
3 SCHEDULE ANALYSIS

Phase Execution Timeline



Colour-coded Gantt: each bar represents a construction phase with duration in project days.

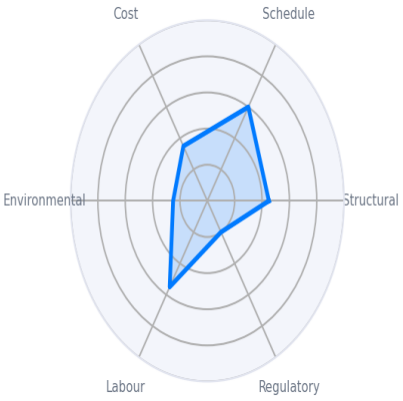
Cumulative Cashflow Projection (12 Months)



Solid line = projected spend. Dashed line = planned baseline. Divergence indicates schedule variance.

Insight: Peak cashflow demand occurs in months 4–8. Ensure draw schedules and credit facilities are arranged at least 6 weeks in advance of each phase milestone.

4 RISK ASSESSMENT



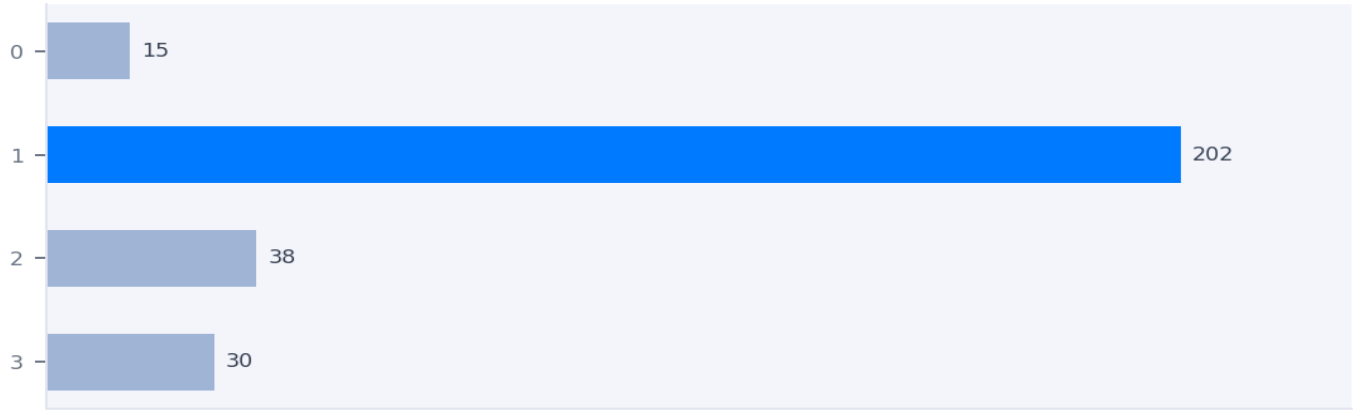
Risk Category	Score	Level	Mitigation
Structural	45/100	Medium	Peer review all structural calcs
Schedule	60/100	Medium	Buffer 15% on critical path
Cost	35/100	Medium	Maintain P90 contingency reserve
Environmental	25/100	Low	Pre-construction site audit
Labour	55/100	Medium	Secure subcontracts early
Regulatory	20/100	Low	Pre-application authority meeting

Risk Impact Matrix

	LOW Impact	MEDIUM Impact	HIGH Impact
HIGH Prob	Monitor	Mitigate Actively	Critical — Escalate
MED Prob	Accept	Mitigate	Mitigate Actively
LOW Prob	Accept	Accept/Monitor	Mitigate

5 RESOURCE UTILISATION

Material Quantity Summary



Bars coloured by utilisation intensity: dark blue = high, medium = moderate, light = low.

Material / Resource	Quantity	Unit	Estimated Cost (■)
wall_volume_cuft	15.0	units	■358
estimated_bricks	202.0	units	■4,822
estimated_steel_kg	37.5	units	■895
plaster_area_sqft	30.0	units	■716

Report Notes & Disclaimer

This report was generated automatically by the StructuraAI analysis pipeline from submitted structural drawings. All cost estimates are indicative and subject to market conditions, site-specific factors, and contractor quotes. Monte Carlo simulations are based on statistical modelling and do not guarantee outcomes. Engage a qualified QS for final cost planning. Risk scores are computed from drawing metadata and should be validated by a structural engineer before project mobilisation.