

TIER-1 DESIGN READINESS SYSTEM

TIER-1 DESIGN REVIEW



IDAR INITIAL DESIGN ASSESSMENT REPORT

COMPILED BY:
TIER-1 ENGINEER, LLC

PREPARED FOR:

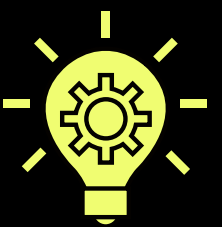
J. MARSTON HOME GOODS

JMARS@JMARSHG.COM



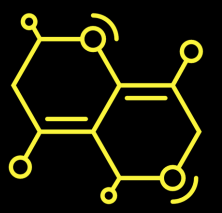
PROJECT INFORMATION

REPORT ID IDAR-11-0038	SUBMISSION DATE 11/11/2011	CLIENT / COMPANY J. MARSTON HOME GOODS
CLIENT TYPE SMALL BUSINESS	PART / ASSEMBLY NAME SENSOR CRADLE ASSEMBLY	
DESIGN STAGE PRE-PROTOTYPE	PART / ASSEMBLY DESCRIPTION SENSOR MOUNT	



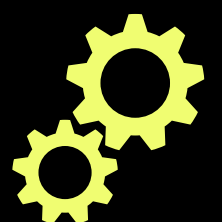
DESIGN INTENT
STATEMENT

PROVIDE A LIGHTWEIGHT OUTDOOR WALL-MOUNTED
CRADLE THAT SECURELY HOLDS A SMALL SENSOR WHILE
ALLOWING SIMPLE SCREW INSTALLATION



PLANNED
MATERIAL

ABS



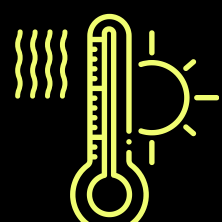
PLANNED
PROCESS

SLS - SELECTIVE LASER SINTERING



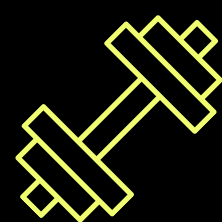
PRODUCTION
VOLUME

25 / YEAR



USE
ENVIRONMENT

OUTDOOR



PERFORMANCE
REQUIREMENTS

SUPPORT A STATIC SENSOR (<200g)
NO DYNAMIC LOADING
NO IMPACT LOAD
NO CHEMICAL LOAD



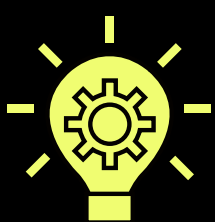
SPECIAL
REQUIREMENTS

ASSEMBLY METHOD: THREADED CONNECTION
INSTALLATION METHOD: SCREWS INTO SUBSTRATE

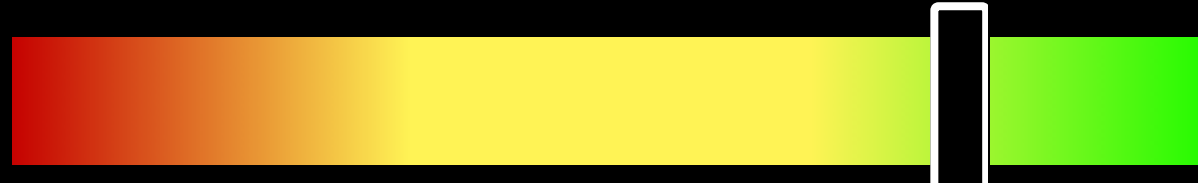
DESIGN SUBMISSION

FILES / DOCUMENTATION SUBMITTED SENSOR_CRADLE_ASSEM.stp	DOCUMENTATION TYPE CAD 2D DRAWING SKETCH PICTURE DOCUMENT OTHER	
PRIMARY CAD FILE SENSOR_CRADLE_ASSEM.stp	FILE TYPE STEP	UNITS METRIC

INITIAL DESIGN ASSESSMENT



DESIGN INTENT
ALIGNMENT



PROCESS
ALIGNMENT



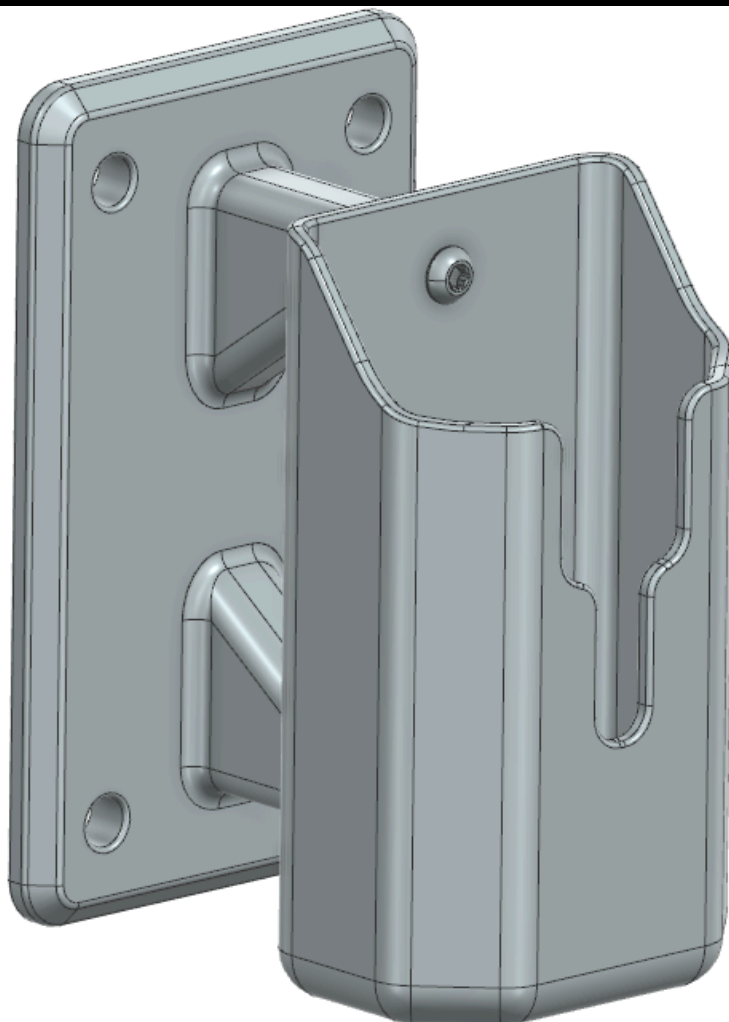
OVERALL
DESIGN MATURITY



INITIAL RECOMMENDED
DESIGN ACTIONS

5

CAD DATA USABILITY



OVERALL REVIEW COMPLEXITY



REQUIRED MISSING INFORMATION

NONE

REVIEW LEVEL ASSIGNMENT

LEVEL 1

EST. LEAD TIME

3-5 BUSINESS DAYS

DESIGN REVIEW PRICING

\$ 3 9 9

INITIATE PHASE THREE →

Payment in full constitutes approval of
IDAR findings and Review Level assignment.

Phase Three will begin after payment and
delivery of any *REQUIRED MISSING INFO.*



REVIEW LEVEL OVERVIEW

Review Levels are assigned by Tier-1 Engineer, LLC during Phase Two based on expected review effort, project complexity, risk assessment, documentation quality, and scope necessary for completeness.
If additional documentation, revised CAD, new project concerns, supplier feedback, or expanded questions are introduced after IDAR approval, the Review Level, pricing, lead time, or approved scope may be revised.

LEVEL 1	LEVEL 2	LEVEL 3
FOCUSED REVIEW	EXPANDED REVIEW	ADVANCED REVIEW
GENERAL INTENT: A focused Design Review for simple parts, early CAD models, narrow design concerns, or limited documentation packages. Level 1 is intended to confirm basic design intent alignment, identify obvious design risks, screen material/process assumptions, and provide practical next-steps without expanding into a broad engineering review.	GENERAL INTENT: A broader Design Review for moderate parts, small assemblies, quote-stage designs, or projects with multiple design concerns. Level 2 is intended to review the main design risk areas, evaluate design intent alignment, identify geometry, access, assembly, and process-screening concerns, and provide prioritized DRR findings.	GENERAL INTENT: An expanded Design Review for complex parts, multi-part assemblies, unclear design direction, high-risk designs, supplier-rejected designs, or documentation-heavy submissions. Level 3 is intended to identify major design risk drivers, clarify readiness issues, review broader assembly concerns, and provide a structured action path.
SCOPE GENERALLY INCLUDES: - Focused review of main design concern - Basic design intent alignment review - Obvious geometry risk identification - Basic material/process screening - Installation or access observations - CAD data usability review - Clear next-step recommendations	SCOPE GENERALLY INCLUDES: - Structured design intent review - Geometry and feature review - Fit, access, and assembly observations - Material/process alignment screening - Documentation completeness review - Design maturity evaluation - Prioritized recommended actions	SCOPE GENERALLY INCLUDES: - Expanded design intent review - Multi-area geometry review - Assembly and interface risk review - Material/process direction screening - Documentation gap review - Major design risk identification - Recommended action order
SCOPE MAY INCLUDE: - Closer review of one key feature - Comments on the primary risk area - Initial design maturity comments - Basic prototype-readiness guidance	SCOPE MAY INCLUDE: - Review of multiple concern areas - Comparison of design tradeoffs - Supplier feedback interpretation - Prototype-readiness recommendations	SCOPE MAY INCLUDE: - Deeper review of high-risk areas - Supplier rejection or no-quote review - Multiple process-risk observations - Expanded documentation review
SCOPE DOES NOT INCLUDE: - Broad feature-by-feature review - Full DFM audit or MAAR-level analysis - Formal tolerance stack analysis - Assembly-level review unless scoped - CAD redesign or model changes - Supplier quote package development	SCOPE DOES NOT INCLUDE: - Open-ended revision cycles - Full DFM audit or production approval - FEA, CFD, or simulation work - Formal tolerance stack analysis - Supplier sourcing or negotiation - Regulatory or safety certification	SCOPE DOES NOT INCLUDE: - Full CAD remodeling - Full DFM audit or MAAR deliverable - Formal simulation or validation - Detailed tooling design - Supplier management - Production process ownership

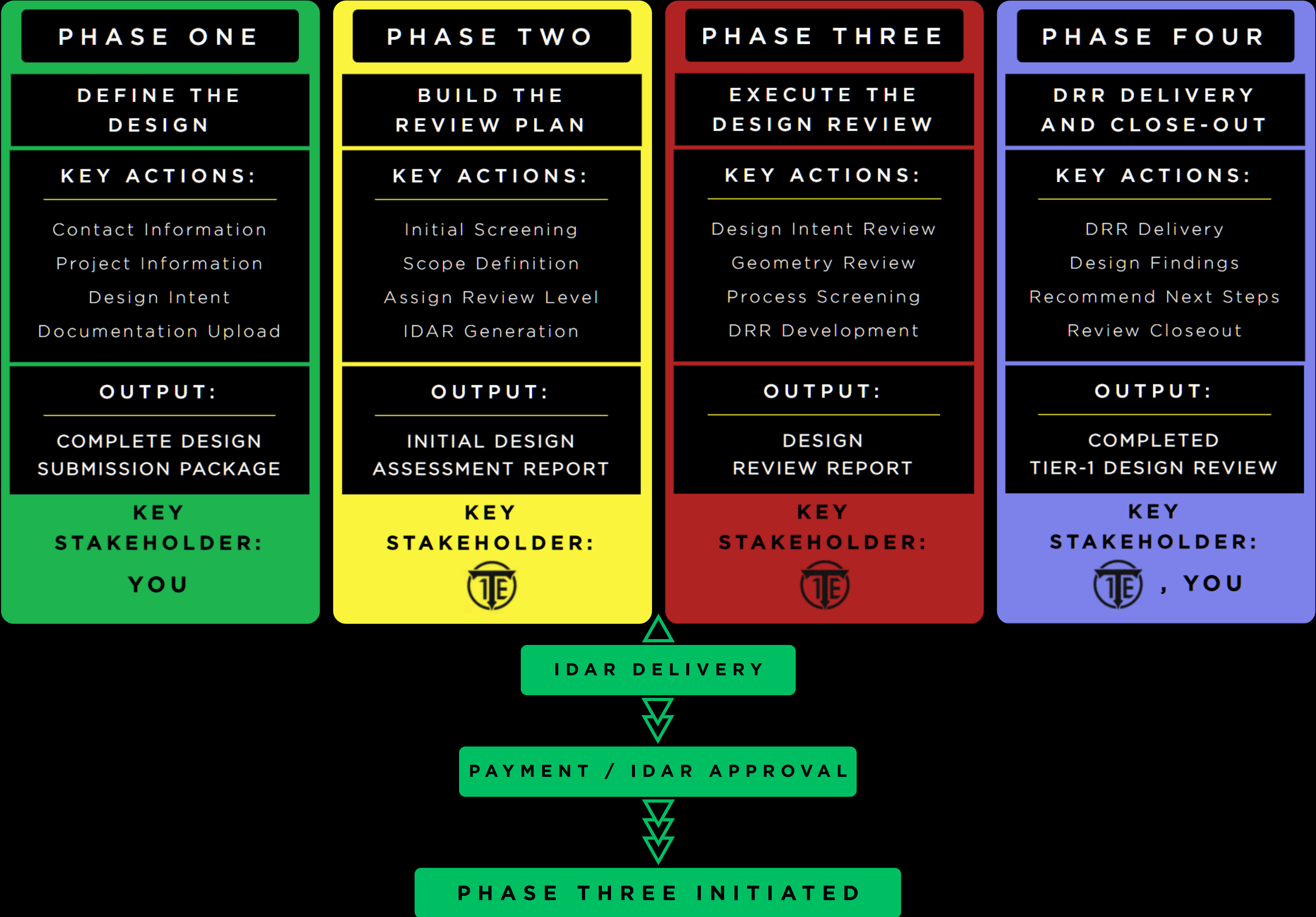
UNIVERSAL SCOPE LIMITS

Unless specifically stated in the IDAR or project-specific scope, no Review Level includes:

- Full product redesign
 - CAD remodeling or CAD revision work
 - Engineering drawings from scratch
 - Full DFM Audit or MAAR-level analysis
 - FEA, CFD, moldflow, simulation, or formal analysis
 - Regulatory, safety, or compliance approval
- Supplier sourcing, negotiation, or management
 - Prototype fabrication or testing
 - Tooling design or production launch ownership
 - Unlimited meetings, revisions, or follow-up support
 - Review of newly added information after IDAR approval
 - Validation, certification, or production release approval

DESIGN REVIEW PHASES OVERVIEW

The four-phase Design Review system is used to keep the review controlled, transparent, and useful from intake through closeout.
PHASE ONE captures the submitted design information, design intent, files, assumptions, and project context so the review starts from a clear baseline.
PHASE TWO screens the submission and finalizes the IDAR so the review level, scope, price, lead time, and missing information are defined before technical work begins.
PHASE THREE executes the actual Design Review and produces the DRR findings, recommended actions, and next-step guidance.
PHASE FOUR delivers the report, closes the approved review scope, and defines what is included or excluded after delivery.
This structure prevents vague expectations, scope creep, unclear responsibilities, and uncontrolled follow-up while giving the client clarity from submission to practical design action.





LEGAL

IDAR USE LIMITATIONS & CLIENT ACKNOWLEDGMENT

This Initial Design Assessment Report, or IDAR, is a preliminary intake and scoping document prepared by Tier-1 Engineer, LLC as part of the Tier-1 Design Readiness System.

The IDAR is intended to define the submitted project condition, identify initial review needs, assign the appropriate Review Level, document known information gaps, and establish the next step required to initiate Phase Three technical review.

The IDAR is not the final technical review deliverable.

The IDAR does not constitute:

- Final design approval
- Production approval
- Tooling approval
- Supplier approval
- Regulatory approval
- Safety certification
- Licensed professional engineering certification
- Engineer of Record work
- A complete DFM audit
- A complete DFA review
- A complete failure investigation
- A complete RFQ package review
- A guarantee of manufacturability, performance, cost, timing, or production success

This IDAR is based only on the information, documentation, files, drawings, CAD data, images, descriptions, assumptions, and project context submitted or otherwise made available to Tier-1 Engineer, LLC at the time of initial assessment.

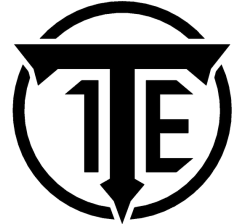
Incomplete, inaccurate, outdated, missing, or misleading information may affect the assigned Review Level, estimated lead time, review scope, pricing, usefulness of the assessment, and accuracy of any initial observations.

Tier-1 Engineer, LLC may revise the assigned Review Level, scope, pricing, lead time, or required information if additional documentation, revised design data, new concerns, supplier feedback, alternate manufacturing processes, or expanded review requests are introduced after IDAR delivery.

Payment in full constitutes acknowledgment and approval of this IDAR, including the assigned Review Level, review scope, pricing, estimated lead time, information still needed, and applicable Tier-1 Design Readiness System Terms & Conditions.

Phase Three technical review begins only after payment confirmation and receipt of any required missing information. The client remains solely responsible for final design decisions, supplier selection, tooling release, testing, validation, regulatory compliance, production approval, and implementation of any findings or recommendations provided by Tier-1 Engineer, LLC.

Use of this IDAR, approval of this IDAR, submission of payment, or continuation of the engagement constitutes acceptance of the applicable Tier-1 Design Readiness System Terms & Conditions.



TIER-1 ENGINEER, LLC

This page defines the limits of the IDAR only. Full Terms & Conditions apply to all Tier-1 Design Readiness System services.

KEY TERMINOLOGY

TERM	DEFINITION
CAD Data Usability	The practical usefulness of the submitted CAD file for review based on file type, geometry condition, units, clarity, and accessibility.
Client Acknowledgment	The client's acceptance of the assigned Review Level, review scope, price, lead time, and IDAR limitations.
Design Intent	The stated purpose, function, use case, and constraints the submitted design is expected to satisfy.
Design Maturity	The current development condition of the design based on completeness, clarity, risk level, and readiness for the next step.
Design Review Level	The assigned level of review based on design complexity, submitted information, review needs, and expected effort.
Design Stage	The current point in the design process, such as concept, pre-prototype, prototype, quote-stage, or pre-production.
Documentation Submitted	The files, drawings, CAD models, images, notes, sketches, or other information provided for initial assessment.
Estimated Lead Time	The expected review window assigned after the project submission, scope, and Review Level are screened.
IDAR	The Initial Design Assessment Report used to document the submitted project condition, review scope, assigned Review Level, price, lead time, and required next steps.
Information Still Needed	Missing or unclear project information that must be provided before the Design Review can begin or be completed properly.
Initial Assessment	The front-end screening of the submitted design package before full technical review begins.
Phase Three	The technical Design Review phase where Tier-1 Engineer performs the review and develops the DRR.
Planned Material	The material identified by the client or project documents as the intended material direction for the design.
Planned Process	The manufacturing process identified by the client or project documents as the intended production or prototype method.
Review Complexity	The estimated difficulty of the review based on part complexity, documentation, risk areas, scope, and required review depth.
Review Scope	The approved boundary of what the Design Review will evaluate and what it will not evaluate.