ENGINEERING & COMPLIANCE

Our company Engineering Services · Code Compliance · Submittal Support

1 OUR COMPANY ENGINEERING SERVICES

CAD / 3D Modeling

Full 3D modeling and shop drawing production from architect's design intent. DXF, DWG, STL, OBJ, and Revit file formats supported.

Wind Load Analysis

Site-specific ASCE 7-22 wind pressure calculations, exposure category determination, and component-and-cladding (C&C;) pressure tables for all project zones.

Installation Optimization

Pre-engineered installation sequences, assembly procedures, and logistics planning to minimize field labor and eliminate installation errors.

Value Engineering

Systematic review of project design to identify cost reduction opportunities through material ptimization, simplified geometry, or production sequencing without compromising architectural intent or performance.

Structural Design & Load Analysis

In-house structural analysis of foam element dead loads, attachment systems, and wind pressure capacity. PE-stamped calculations available for Risk Category III/IV projects or wind speeds exceeding 130 mph.

Custom Mounting System Design

Engineering of internal armatures, base onnections, through-bolt systems, and concealed attachment hardware optimized for each project's structural conditions.

Submittal & Permitting Support

Preparation of AHJ submittals, product data packages, ASTM test reports, ICC-ES evaluation report references, and permit-ready documentation packages.

2 CODE COMPLIANCE MATRIX

Code / Standard	Section	Requirement	Our company Compliance Method
IBC 2021	§2603.3	FSI ≤ 25 or ≤ 75 per occupancy	ASTM E84 test reports provided for all foam/coating systems
IBC 2021	§2603.4	Thermal barrier on interior faces	Product data specifies TB requirement; field verification checklist provided
IBC 2021	§2603.5	NFPA 285 for exterior walls >1 story	FM-listed assemblies available; NFPA 285 test report references on request
ASCE 7-22	§26–30	Design wind pressures — C&C	Site-specific ASCE 7-22 calculations by PE on request
ICC-ES AC71	§4–5	Fastener schedule & foam strength	AC71-compliant fastener tables; PE calculations confirming SF ≥ 3.0
ASTM C578	Table 1	EPS density & mechanical properties	Material certifications provided; lot testing on request
IBC 2021	§1207	STC 50 between dwelling units	Assembly data provided; spray foam + framing + GWB assemblies documented
ENERGY CODE	per state	Minimum R-value ci	R-value tables and energy code compliance data provided per project state
CSI MasterFormat	06 60 00	Plastic Fabrications specification	This document prepared in full CSI 3-Part Format compliance

3 WHY OUR COMPANY — ENGINEERING DIFFERENTIATORS

Capability	Our company	Typical Competitor
Engineering in-house	YES — PE, structural, CAD, 3D	NO — outsourced or none
Design changes during production	YES — real-time adaptation	NO — new order required
Lead time	7–14 business days typical	4–8 weeks typical
Custom geometry capability	Unlimited — CNC from any 3D file	Limited standard profiles
Pre-assembled delivery	YES — reduces site labor	NO — field assembly required
Wind load calculations	YES — site-specific ASCE 7-22	NO — generic data only
ASTM E84 documentation	YES — current test reports provided	Sometimes — may require extra cost
Coastal/hurricane zone experience	YES — FL-based, 25+ years	Limited
Free warehouse storage	YES — hold until client ready	NO
Nationwide delivery	YES — all 50 states	Regional only
TCO reduction vs stone/concrete	30–50% documented savings	Not quantified

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