AIA COURSE 3 OF 3 · 1.0 LU|HSW + GBCI

DUAL CREDIT: AIA HSW + GBCI LEED CE

01 Fire, Thermal & Code Compliance

02 Structural Systems & Wind/Seismic Design

03 Sustainability, LEED & Total Cost of Ownership

AAC SUSTAINABILITY & LEED

Total Cost of Ownership & Green Building Performance

LEED v4 / v5 · GBCI · ASHRAE 90.1 · IECC · Embodied Carbon

Presented by: **Michael Hofmann** | Registered AAC Specialist | 40+ Years Experience
Managing Principal of MHE Group • International AAC Expert • 3,000+ AAC Projects Worldwide
CES provider number 10149078

THE CHALLENGE

WHY CONVENTIONAL CONSTRUCTION IS FAILING U.S. MARKETS

Rising costs, climate exposure, code pressure, and insurance crisis demand a better building system

01

RISING CONSTRUCTION COSTS

Material & labor inflation outpacing project feasibility. Insurance costs for combustible wood-frame buildings increasing 15–40% annually across the U.S. — with the steepest spikes in coastal, wind, hail, and wildfire-exposed markets.

02

INSURANCE & COVERAGE CRISIS

Private carriers restricting or exiting coverage on combustible wood-frame buildings in wind, hail, and wildfire-exposed markets. Non-combustible construction = lower premiums, better lender terms, and easier qualification nationwide.

03

HURRICANE RESILIENCE

Cat 4/5 hurricanes, EF3+ tornadoes, and coastal storms damage many wood-frame structures annually. High-wind regions across the Gulf Coast, Atlantic, and inland markets benefit from masonry-class envelope performance, which engineered wood-frame assemblies struggle to match under repeated cyclic loading.

04

ENERGY CODE COMPLIANCE

IECC 2021 / state codes tighten envelope performance. R-values, airtightness, and thermal-mass paths increase each cycle; 8-in. AAC may satisfy CZ 1–2 mass-wall path (verify via COMcheck).

05

LONG-TERM OWNERSHIP COSTS

30-year TCO for wood-frame can include hidden costs from mold remediation, termite control, rot repair, hurricane damage, repainting, and insurance claims; these can outweigh initial savings vs. masonry in exposed climates (MHE project estimate, project-specific).

AAC supports resilience, sustainability, and lower lifecycle cost strategies

AAC:

RESILIENCE

Hurricane, tornado & seismic-resistant when engineered
Compliant in high-wind regions when engineered to ASCE 7-22
Wall systems tested to high design wind speeds (project-specific)
May qualify for non-combustible/wind insurance discounts (carrier- and jurisdiction-specific)

SUSTAINABILITY

Reported 30–60% lower embodied carbon vs grouted CMU in some published AAC EPDs; actual reduction is product-, plant-, and project-specific and requires EPD/LCA verification.
May contribute to LEED v4/v4.1/v5 credit documentation (project-specific)
May support Passive House, WELL, and FORTIFIED Home strategies when assemblies are designed and tested accordingly

LOWER TCO

$35–75/SF 30-yr NPV illustrative (MHE project estimate; project-specific)
Inorganic — termite- and mold-resistant (with moisture control + finishes)
Smaller HVAC potential; sprinkler scope per IBC Ch. 9 / NFPA 13 / AHJ
Longer paint & finish maintenance cycles vs wood frame

AAC: BLOCKS + REINFORCED PANELS — A FULL BUILDING SYSTEM

AAC MASONRY BLOCKS

Standard 8-in. AAC blocks (typical density 25–50 lb/ft³ across AAC classes per ASTM C1693) for load-bearing walls, partitions, and shear walls. Replaces CMU with 1/3 the weight and superior thermal performance. Available in 4”, 6”, 8”, 10”, 12” thicknesses.

AAC REINFORCED PANELS — WALLS

Thin-bed-mortar AAC reinforced panels (ASTM C1694) with embedded steel for high-wind and seismic applications. Factory-produced for dimensional precision. Spans up to 20 ft as load-bearing wall elements (project-specific engineering).

AAC REINFORCED PANELS — FLOOR & ROOF

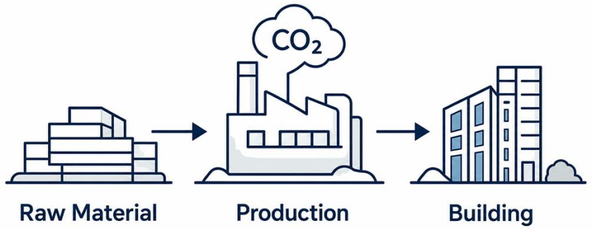
Horizontal AAC reinforced floor/roof panels (ASTM C1694) spanning beam-to-beam. Alternative to precast hollow-core, steel decking, or wood joists. Fire-rated, thermally efficient, and high STC ratings when tested as assemblies.

THE AAC LOAD-BEARING SYSTEM

Up to 4-story load-bearing construction without an RC frame in many jurisdictions. MHE case studies report up to ~21% cost savings vs RC frame and faster schedule (project-specific).
Eliminates conventional formwork entirely.

LEARNING OBJECTIVES — COURSE 3

1.0 LU|HSW + GBCI

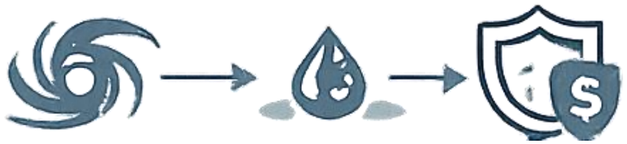


01

Calculate the embodied carbon, recycled content, and regional sourcing advantages of AAC relative to CMU, ICF, and wood-frame systems

02

Map AAC material properties to LEED v4/v4.1/v5 credit categories across EA, MR, EQ/IEQ, SS, and WE — and describe potential contributions



03

Perform a 30-year Total Cost of Ownership (TCO) analysis for AAC vs. conventional construction, including energy, maintenance, insurance, and lifecycle factors

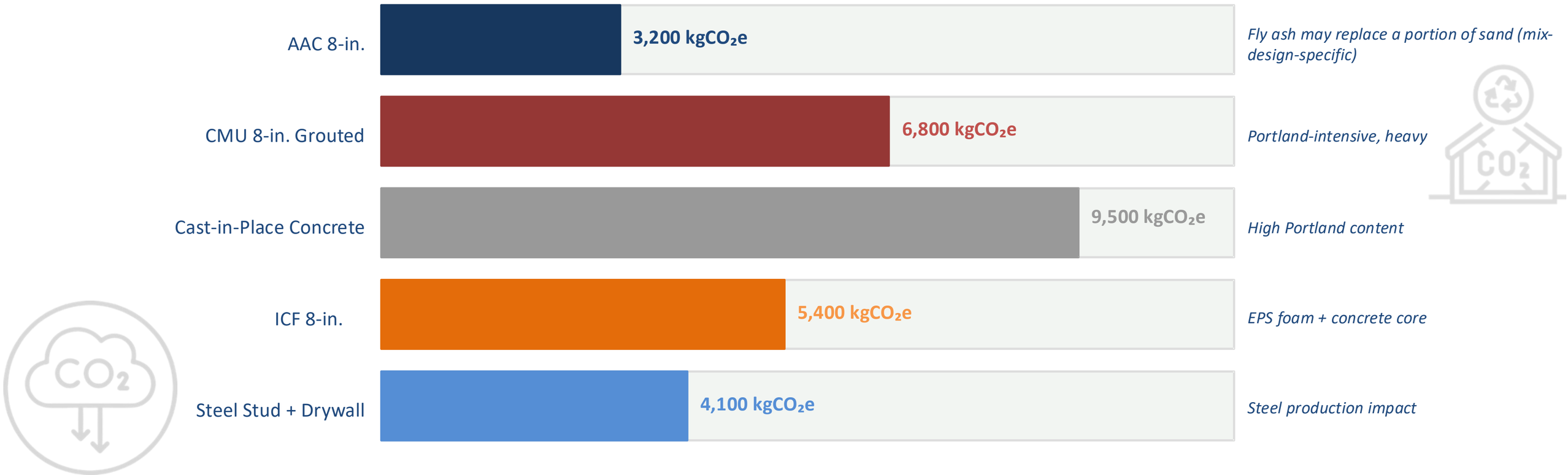
04

Identify U.S. regional sustainability drivers: energy code compliance across climate zones, wind and seismic resilience, mold prevention in humid markets, and insurance premium reduction strategies

This program qualifies for AIA LU|HSW credit AND GBCI continuing education hours for LEED APs and Green Associates

EMBODIED CARBON & LIFECYCLE ASSESSMENT

EMBODIED CARBON COMPARISON — $kgCO_2e$ per 1,000 SF of WALL (8-in. equiv.)



Source: published industry AAC EPDs (e.g., UL Environment); NIST LCI database; ICE Database v3.0. Values are illustrative order-of-magnitude estimates; actual A1–A3 values vary by mix design, regional sourcing, plant, and EPD version. Consult current product-specific EPD/LCA. Unit: $kgCO_2e$/1,000 SF wall (8-in. equivalent).

★ LEED v5 FOCUS: LEED v5 BD+C strengthens embodied-carbon requirements, with project-team-level quantification of A1–A3 carbon and a whole-building LCA credit pathway under MR (verify current USGBC requirements at design time). AAC with a low published GWP may help reduce assembly-level embodied carbon under LEED v5 Material strategies (project-specific, EPD/LCA-dependent).

ENERGY & ATMOSPHERE + MATERIALS & RESOURCES

EA — ENERGY & ATMOSPHERE | Potential credit support

EA Credit — Optimize Energy Performance

2–5 pts

AAC thermal mass and continuous wall construction may reduce heating/cooling energy versus ASHRAE 90.1 Appendix G baseline; reported case-study reductions of ~10–25% are climate-, occupancy-, and HVAC-dependent and require project-specific whole-building energy modeling (EnergyPlus/eQUEST). Low blower-door leakage is achievable when joints, penetrations, and detailing are properly addressed. HVAC downsizing has been observed in case studies and requires load calculation per ACCA Manual J/N. Reported credit contribution is project- and model-specific.

EA Credit — Enhanced Commissioning

Supports

Continuous AAC wall construction can support commissioning targets for air leakage and thermal performance when detailing, penetrations, and finishes are properly coordinated. May simplify Cx documentation for envelope assemblies.

MR — MATERIALS & RESOURCES | Potential credit support

MR Credit — Building Product Disclosure and Optimization: EPDs

2–4 pts

AAC manufacturers publish Environmental Product Declarations (EPDs) per ISO 14025/EN 15804. EPDs document global warming potential, embodied carbon, and resource consumption. Each AAC product with a valid EPD contributes toward the 20-product threshold for credit achievement. Fly ash content documented in EPD.

MR Credit — Sourcing of Raw Materials

1–4 pts

Some AAC mixes incorporate fly ash and other supplementary cementitious materials; recycled and pre-consumer content varies by plant and is documented in product-specific EPDs. Regional/raw-material extraction and manufacturing distance may support Sourcing of Raw Materials documentation. Verify per project with current EPD and LEED reference guide.

IMPORTANT: AAC alone does not earn LEED certification or points. AAC may contribute to LEED v4/v4.1/v5 credit documentation when properly specified, modeled, and documented as part of a whole-building strategy.

INDOOR ENVIRONMENTAL QUALITY + SUSTAINABLE SITES

EQ — INDOOR ENVIRONMENTAL QUALITY | Potential credit support

EQ Credit — Acoustic Performance

1–2 pts

Specific 8-in. AAC wall assemblies have achieved STC ratings in the low 50s and floor/ceiling assemblies have achieved IIC ratings ≥50 when tested per ASTM E90/E492. Performance is assembly-specific; verify ratings via tested assemblies. May exceed IBC minimum STC 50 for multifamily separation walls without added sound batts — relevant for hospitality, multifamily, and healthcare.

EQ Credit — Low-Emitting Materials (assembly-dependent)

Supports

AAC material is inorganic and contributes low/no VOCs; coatings, adhesives, mortars, and sealants must still meet Low-Emitting Materials criteria. AAC is mold-resistant; mold control depends on moisture management, detailing, and finishes.

MR/SS — WASTE & SITE | Potential credit support

MR Credit — Construction and Demolition Waste Management

Prerequisite

Dry-cutting AAC on site can reduce construction waste compared with wet-trade systems. Lightweight panels may reduce site vehicle trips. AAC cut-offs can be reused as fill on some projects. Document waste streams per LEED MR Construction and Demolition Waste Management requirements.

SS Credit — Heat Island Reduction

1 pt

Light-colored AAC surfaces and reflective coatings on AAC roof panels may contribute to SRI-based Heat Island Reduction strategies; specific SRI values depend on the applied finish and require manufacturer testing data. Most relevant in hot-climate and urban contexts.

IMPORTANT: AAC alone does not earn LEED points or certification. It may support documentation across multiple credit categories as part of a whole-building LEED strategy — consult a LEED AP for project-specific modeling.

LEED CREDIT SUMMARY — AAC TOTAL CONTRIBUTION

EA Energy & Atmosphere

Potential contribution

May support Optimize Energy Performance and Enhanced Commissioning strategies via thermal mass, lower envelope leakage, and HVAC right-sizing; requires ASHRAE 90.1 Appendix G whole-building modeling.

MR Materials & Resources

Potential contribution

May support EPD (ISO 14025/EN 15804), Material Ingredients, and Sourcing of Raw Materials documentation; recycled/SCM content and sourcing distance are product- and plant-specific.

IEQ Indoor Env. Quality (EQ)

Potential contribution

May support Acoustic Performance and Low-Emitting Materials credits when tested assemblies and compliant finishes are specified. AAC material is inorganic and mold-resistant.

SS Sustainable Sites

Potential contribution

May support Construction and Demolition Waste Management and Heat Island Reduction strategies (SRI of finish-specific). Site- and finish-dependent.

AAC LEED CONTRIBUTION

Project-specific; depends on documentation, modeling, and design integration

POTENTIAL LEED CREDIT SUPPORT | project-specific

CERTIFIED 40-49 pts	SILVER 50-59 pts	GOLD 60-79 pts	PLATINUM 80+ pts

AAC IMPACT: As part of a holistic LEED strategy, AAC may contribute documentation across several credit categories that, in some project examples, has helped projects move toward a higher certification tier. Actual point contribution is project-specific. For LEED v5, AAC with a low published GWP may help projects address embodied-carbon requirements (verify current USGBC v5 requirements and consult a LEED AP).

AAC supports resilience, sustainability, and lower lifecycle cost strategies | Consult your LEED AP for project-specific modeling and documentation requirements

ENERGY CODE COMPLIANCE — ASHRAE 90.1 & IECC

AAC WALL ASSEMBLY — ENERGY CODE STATUS BY CLIMATE ZONE

Climate Zone	Example City	Code Requirement	8-in. AAC Assembly	Code Status
CZ 1 (Hawaii, Puerto Rico)	Honolulu, HI	per IECC mass-wall table	~R-10 + mass-wall path	**May comply via mass-wall path***
CZ 2 (Hot-Humid)	Orlando / Tampa FL	per IECC mass-wall table	~R-10 + mass-wall path	**May comply via FBC/IECC mass-wall path***
CZ 3 (Warm)	Atlanta, Dallas	per IECC mass-wall table	~R-10 + ~1-in. exterior CI	**Typically requires added CI; verify via COMcheck**
CZ 4 (Mixed)	Washington DC	per IECC mass-wall table	~R-10 + ~2-in. exterior CI	**Typically requires added CI; verify via COMcheck**
CZ 5 (Cool)	Chicago, Denver	per IECC mass-wall table	~R-10 + ~3-in. exterior CI	**Requires added CI + COMcheck/energy modeling**

Note: ASHRAE 90.1 and IECC provide mass-wall provisions based on heat capacity / weight per area. 8-in. AAC (typical density 25–50 lb/ft³ across AAC classes per ASTM C1693) may qualify for mass-wall treatment depending on the class specified. Verify compliance via the applicable prescriptive table or whole-building energy modeling (COMcheck / EnergyPlus).

★ U.S. MARKET REACH: 8-in. AAC walls may satisfy IECC/ASHRAE 90.1 mass-wall provisions in CZ 1–2 when documented as mass walls via the prescriptive path or COMcheck/EnergyPlus modeling; state-adopted codes vary — typical applications include Florida, Hawaii, Gulf Coast, and Caribbean markets. CZ 3–4 typically requires 1–2 in. of added continuous insulation. Compliance in cooler zones is achievable with additional CI and whole-building modeling.

INITIAL CONSTRUCTION COST IMPACTS

Basis: 10,000 SF multifamily case study, mixed CZ 2–4 reference, 8-in. AAC vs. 2x6 wood stud + R-19. Figures are MHE project estimates / Florida-2026 assumptions and ranges from 2018–2025 MHE case studies; actual costs vary by market, labor, design, and project size. Not a guaranteed cost outcome — consult MHE and the project cost estimator for project-specific analysis.

COST CATEGORY	AAC vs. BASELINE	WOOD FRAME	KEY DRIVER
Structural material cost	**±0% to +8%**	Baseline	AAC material premium may be offset by labor savings on some projects (case-study estimate)
Labor (masonry vs. framing)	**–20 to –30%**	Baseline	Fewer units to place and faster panel erection have been reported on MHE case studies; trade availability and crew experience drive actual labor outcome
Foundation savings	**–8 to –15%**	Baseline	AAC density is approximately 1/3 of grouted CMU on a wall-weight basis; lighter walls can permit smaller footings and reduced pile capacity per project structural engineering
Fire sprinkler system	**Project-specific**	Required	AAC is non-combustible; sprinkler requirements are set by IBC Chapter 9 / NFPA 13 and the AHJ. Sprinkler scope and requirements are determined by IBC Chapter 9, NFPA 13, AHJ review, occupancy, area, height, and project-specific code analysis.
HVAC equipment (downsized)	**–10 to –20%**	Baseline	Thermal mass and reduced infiltration may reduce peak cooling load; HVAC right-sizing requires Manual J/N and whole-building energy modeling (project-specific)
Windows & openings	**No change**	Baseline	AAC is sawable on site, simplifying opening modifications. Window bucks integrate with AAC walls with reduced thermal bridging vs. metal-stud assemblies

NET INITIAL COST: In MHE case studies (CZ 2–4 multifamily), AAC has come in cost-neutral to modestly positive vs. wood frame when labor, foundation, and mechanical savings are fully accounted. Outcome is project-, market-, and design-specific.

ANNUAL OPERATING SAVINGS — YEAR 1 THROUGH 30

Basis: 10,000 SF multifamily case study, CZ 2–4 reference (MHE project estimate). Annual savings shown compound over a 30-year hold at a 5% discount rate; figures are illustrative and not guaranteed.

ENERGY SAVINGS

–20 to –35%

Heating & Cooling

8-in. AAC: steady-state R ~10 plus thermal-mass benefit. Dynamic equivalent values higher than steady-state have been reported via whole-building energy modeling in hot-arid / high-diurnal climates; do not apply prescriptively in hot-humid Florida. AAC may reduce cooling loads depending on climate, orientation, envelope, and HVAC modeling. Case-study figures are project-specific and not guaranteed.

INSURANCE PREMIUM

–5 to –25%

Annual Premium

Non-combustible Type I/II construction may receive a more favorable fire risk classification with some carriers. AAC may qualify for non-combustible/wind/hail premium adjustments; actual discount depends on carrier, jurisdiction, and underwriting and is not guaranteed.

PEST CONTROL / TERMITE

–100%

Treatment Cost

AAC is inorganic and termite-resistant — it is not a food source for subterranean or drywood termites. Wood-frame buildings in much of the U.S. typically carry annual termite treatment contracts; AAC walls can reduce or avoid those wall-related costs over a 30-year hold (project-specific).

MOLD REMEDIATION

$0 vs. $5–30K

Per Event Avoided

Mold issues in wood-frame buildings in hot-humid climates (CZ 1–2) are well documented and driven by humidity, storms, and detailing. AAC is inorganic and mold-resistant; it is not a food source for mold. Mold control still depends on moisture management, detailing, and finishes — AAC reduces, but does not eliminate, mold risk.

ILLUSTRATIVE ANNUAL OPERATING SAVINGS — AAC vs. WOOD FRAME

$40K – $95K / year (case study; not guaranteed)

Illustrative range based on MHE project estimates, CZ 2–4 markets, 5% discount rate; includes modeled energy, insurance, pest control, and mold-related items. Project-specific; not guaranteed.

Over 30 yrs at 5% discount, illustrative savings ≈ $0.6M–$1.5M NPV (MHE case study; project-specific).

AAC THERMAL PERFORMANCE: 8-in. AAC = steady-state R ~10. Dynamic equivalent values higher than steady-state have been reported in hot-arid / high-diurnal climates via whole-building energy modeling — do not apply prescriptively in hot-humid Florida or for code compliance. Mechanical sizing requires project-specific modeling.

30-YEAR LIFECYCLE VALUE & NPV ADVANTAGE

Basis: 10,000 SF multifamily case study, CZ 2–4 reference, 5% discount rate. MHE project estimates and IBHS post-storm observations; figures are illustrative and project-specific.

LIFECYCLE CATEGORY	AAC	WOOD FRAME	WHY IT MATTERS
Exterior Paint / Stucco Cycle	**12–20 yr cycle**	5–8 yr cycle	AAC stucco/coating cycles are typically longer than painted wood-frame siding; over 30 years, AAC may require fewer refinish cycles (climate-/finish-specific).
Structural Repair (Rot / Warp)	**~$0**	Significant ($5–25/SF)	AAC is inorganic and does not rot, warp, or delaminate (durability still depends on moisture management and finishes). Wood-frame stud rot is a documented risk in humid/marine climates over a 30-year hold.
Post-Hurricane Recovery	**Often limited to cosmetic (project-specific)**	Significant in observed events ($30–200/SF, IBHS/MHE observations)	AAC reinforced assemblies engineered to ASCE 7-22 and tested per HVHZ protocols have performed well in observed high-wind events (MHE field surveys; IBHS post-disaster studies). Outcomes depend on design, openings, and roof system.
Termite Treatment (30-yr)	**$0 total**	$800–2,500/unit/yr	AAC is inorganic and termite-resistant — not a food source for termites. Wall-related termite treatment costs are typically avoided over a 30-year hold (project-specific). Wood-frame buildings in much of the U.S. carry annual treatment contracts.
Mold Liability / Remediation	**Substantially reduced (project-specific)**	$5,000–30,000 per event	Wood-frame buildings in CZ 1–5 can experience elevated mold incidence after storms, HVAC failures, and construction moisture. AAC is inorganic and mold-resistant — not a food source for mold (moisture control still required).

ILLUSTRATIVE 30-YEAR NPV ADVANTAGE (AAC vs. WOOD FRAME)

5% discount rate | 10,000 SF multifamily | CZ 2–4 reference

~$35–$75 / SF ≈ $350K–$750K (MHE case study; illustrative; not guaranteed)

RESILIENCE, INSURANCE & DISASTER RECOVERY

Cat 4 tested

Hurricane Survival

*Tested AAC reinforced assemblies — design wind speeds**

Up to ~15%*

Insurance Premium

**Illustrative non-combustible construction premium adjustment — where applicable and program- / carrier-dependent.*

0

Mold Remediation Events

Reported in MHE AAC portfolio over 30+ years (project-specific)

30+ yr*

Design Service Life

**Reported design service life vs. ~20–30 yr typical wood frame per industry surveys; actual longevity varies by climate, maintenance, and exposure.*

HURRICANE RESILIENCE PERFORMANCE

- Wind load testing: AAC reinforced panel assemblies have been tested per ASTM E330 and Florida HVHZ protocols TAS 201 (large missile impact), TAS 202 (uniform static air pressure), and TAS 203 (cyclic pressure) when designed and installed per ASCE 7-22 wind loads and manufacturer specifications (project- and product-approval-specific).
- Large-missile impact: Tested per TAS 201 and ASTM E1886/E1996 for specific assemblies; results are assembly-specific and tied to current Florida Product Approval / NOA documentation.
- Flooding: AAC is inorganic and may be salvaged after drying in many cases without supporting mold growth, whereas wood-frame walls often require replacement. Outcome depends on flood duration, contamination, and finishes.
- Post-event re-entry: MHE field observations report AAC structures often habitable sooner than comparable wood-frame structures after high-wind events; project-specific.
- Post-Harvey, Irma, Ian, Ida, and Maria: AAC buildings in MHE's Gulf Coast, Southeast, and Caribbean portfolio reported limited structural damage compared with adjacent wood-frame structures (MHE field observations; project-specific).

INSURANCE & FINANCING ADVANTAGES

- Fire premium: Non-combustible Type I/II buildings may receive a more favorable fire-risk classification with some carriers (carrier- and jurisdiction-specific).
- Wind premium: High-wind-engineered AAC systems may qualify for wind/hail premium adjustments in some markets (carrier- and jurisdiction-specific; not guaranteed).
- Mold endorsement: Carrier requirements vary; AAC's mold-resistant, inorganic wall material may reduce underwriting friction (jurisdiction- and carrier-specific).
- HOA / condo: Lower annual reserves possible for exterior maintenance — fewer refinish cycles, no wall-related termite treatment, and reduced rot risk (project-specific).
- Lender preference: Some institutional lenders increasingly prefer non-combustible construction for multifamily loan approval and rate (market-specific).

AAC ACROSS RATING SYSTEMS — LEED, WELL, PASSIVE HOUSE, FORTIFIED

LEED v4 / v4.1 / v5 BD+C · USGBC / GBCI

- EA: Optimize Energy Performance (potential support)
- MR: EPDs, Sourcing of Raw Materials, Material Ingredients (potential support)
- EQ: Acoustic Performance + Low-Emitting Materials (potential support; assembly- and finish-dependent)
- IN: Innovation strategies (exemplary performance / Integrative Process)

Multiple credit categories may be supported. Project-specific point contribution; AAC alone does not earn LEED points.

WELL Building Standard v2 · IWBI / GBCI

- AIR: No VOC, no mold substrate — Concept A02
- SOUND: STC 52+ party walls — Concept S01
- THERMAL COMFORT: Mass wall reduces temperature swing
- MIND: Acoustic privacy supports occupant well-being

Relevant for healthcare, multifamily, and education. AAC may support Air and Sound WELL features when assemblies and finishes are properly specified.

Passive House / PHIUS · Passive House Institute

- Thermal bridge-free: AAC monolithic — no studs
- Airtightness: AAC walls can support low ACH50 results when joints, penetrations, and details are properly addressed
- Thermal mass: AAC moderates interior temperatures
- Heating/cooling demand: In CZ 1–3, AAC assemblies may help approach PH criteria; CZ 4–5 typically requires added CI.

AAC can be a strong fit for Passive House projects in hot-arid, hot-humid, and mixed climates when combined with whole-building energy modeling. Thermal mass and air-sealed assemblies are advantages; outcomes are project-specific.

FORTIFIED Home™ (IBHS) · Insurance Institute for Business & Home Safety

- FORTIFIED Roof + Wall: AAC may comply via the masonry path when designed and tested accordingly
- HVHZ detailing per TAS 201/202/203 supports highest FORTIFIED tiers when documented
- Impact resistance: TAS 202 tested — no penetration
- Insurance impact: FORTIFIED designation may unlock premium adjustments through select IBHS-aligned carrier programs; availability and amount vary by state and carrier and are not guaranteed.

FORTIFIED Home is an expanding standard. FORTIFIED designation may reduce homeowner insurance premiums in some markets (carrier- and jurisdiction-specific).

GBCI DUAL CREDIT — HOW LEED APs REPORT THIS COURSE

This course earns BOTH 1.0 AIA LU|HSW AND 1.0 GBCI CE Hour simultaneously — report once, counts for two credentials

AIA Architect Members

Annual Requirement: 18 LU / 12 HSW

HOW TO REPORT

1. Provide AIA member number to course host
2. MHE Group (AIA CES Provider) auto-reports to AIA
3. View transcript at aia.org → My AIA → CE Transcript
4. This course = 1 of 12 required HSW LUs

LEED AP BD+C Holders

Annual Requirement: 30 CE hours (6 LEED-specific)

HOW TO REPORT

1. Provide GBCI credential number to course host
2. Course reported as general CE hour to GBCI
3. View at usgbc.org → Credentials → Overview
4. Counts toward 24 general CE hours / 2-year cycle

LEED Green Associate

Annual Requirement: 15 GBCI CE hours

HOW TO REPORT

1. Provide GBCI number to course host
2. Reported as 1.0 CE hour to GBCI account
3. Satisfies 1 of 15 required CE hours
4. View at usgbc.org → Credentials → Overview

For GBCI dual-credit reporting, provide BOTH your AIA number and GBCI credential number to the course host before the session begins

MHE GROUP — THREE-COURSE AAC CURRICULUM SUMMARY

001

1.0 LU|HSW

Fire, Thermal & Code Compliance

- Up to 4-hr fire-resistance rating for tested AAC assemblies
- Non-combustible; sprinkler requirements per IBC / NFPA 13 + AHJ
- R-value comparison (steady-state + dynamic): AAC vs CMU vs ICF
- IBC Ch. 21; ASTM C1693/C1691/C1694/C1692; ASHRAE 90.1
- Product range: blocks, panels, floor/roof systems

002

1.0 LU|HSW

Structural Systems & Wind/Seismic Design

- AAC strength classes per ASTM C1693 (AAC 2.0–6.0)
- AAC Load-Bearing System — up to 4-story without RC frame (project-specific)
- ASCE 7-22 wind loads; HVHZ TAS 201/202/203 where applicable
- Seismic per TMS 402-22 Ch. 7/11; construction per TMS 602-22
- Connection detailing, specification guide (CSI Master Format)

003

1.0 LU|HSW + GBCI

Sustainability, LEED & Total Cost of Ownership

1.0 LU|HSW + GBCI

- Embodied carbon: AAC EPDs report reductions vs CMU; product-/plant-specific (EPD/LCA)
- LEED v4/v4.1/v5 credit-support map (project-specific contribution)
- 30-yr TCO: illustrative $35–75/SF NPV (MHE case study; project-specific)
- WELL, Passive House, FORTIFIED — potential alignment (assembly-specific)
- GBCI dual credit reporting for LEED APs

Total: 3.0 LU|HSW · 25% of AIA annual HSW requirement · All three courses available as in-house Lunch & Learn from MHE Group · Contact: www.mhe.group

QUESTIONS & DISCUSSION

Course 3 of 3 — Sustainability, LEED & Total Cost of Ownership

PRESENTER CONTACT

Michael Hofmann | MHE Group

CEO of MHE Group | Registered AAC Specialist
www.mhe.group | 40+ Years | 3,000+ AAC Projects Worldwide

AIA CREDIT INFORMATION

Program Title:

AAC Sustainability, LEED &
Total Cost of Ownership

AIA Credit:

1.0 LU | HSW

GBCI Credit:

1.0 CE Hour (Dual Credit)

Format:

Lecture / Lunch & Learn

Course in Series:

3 of 3

AIA Provider:

MHE Group (CES # 10149078)

REFERENCES

· MHE Group Project Cost Database (2010–2025)

· USGBC LEED v4 / v5 BD+C Reference Guide

· ASHRAE 90.1-2022 + IECC 2021 / 2024 (where adopted)

· GBCI CE Course Criteria (December 2024)

· ISO 14025 / EN 15804 EPD framework; ASTM C1693 (material), C1691, C1694, C1692, C1660

· IWBI WELL Building Standard v2

· IBHS FORTIFIED Home™ Standard 2022

· IECC 2021 / state-adopted energy codes · Florida Building Code (Energy + HVHZ TAS 201/202/203) — CZ 1–2

All cost figures are MHE project estimates / Florida-2026 assumptions and project-specific; consult MHE for project analysis. Not guaranteed savings.