ADDENDUM F

Shelter & Structural Safety: Zero to Full Competency

Curious how Tier, Stage, and Phase relate? See the Glossary.

Why This Addendum Exists

Chapter 7 tells you what to have and do at each tier of a disruption. It does not teach the underlying competency behind either half of that: structural safety judgment, and building shelter when your home isn't an option. This addendum is a skill-building curriculum for both, built from real Utah programs and certifications.

It's organized by skill stage, not by disaster duration, following the same structure as the other addenda. Treat the self-check at the end of each stage as the actual gate.

Four stages: Foundations (basic safe practice), Applied Practice (hands-on competence), Self-Sufficiency (independent, resilient skill), and Mastery & Teaching (able to teach others and operate at community scale). This addendum's companion, Addendum F: Security & Self-Defense, runs the same four-stage structure for entry security and personal defense; the two are meant to be worked through side by side.

Stage 1: Foundations (Awareness)

Goal: know the core structural-safety facts well enough to make sound decisions and not create new risk. This stage is readable in a weekend.

Core Knowledge

The core concept at this stage is the ATC-20 tagging logic already covered in Chapter 17: a building can look intact and still be structurally unsafe, and the reverse is also true. Understand the basic red flags (foundation cracks, out-of-plumb walls, a sagging roofline) covered in Chapter 17's Tier 1 guidance, and understand basic shelter physics: insulation from the ground and wind matters as

much as a roof overhead, which is why an uninsulated lean-to in cold weather can be more dangerous than no shelter with a fire. See the Emergency Shelter Basics skill guide for the actual heat-retention priorities behind that logic.

Stage 1 Learning Path

Resource	Cost / Format	Notes
Great Utah ShakeOut	Free, annual, online registration	shakeout.org/utah. The statewide earthquake drill; participating is the single easiest Stage 1 shelter action available.
University of Utah Outdoor Survival Skills (Lifelong Learning)	Low-cost, single-session	continue.utah.edu. An accessible, low-commitment intro to shelter building, fire starting, and water filtration basics.

Stage 1 Practice Exercises

- **Identify your home's real structural red flags:** Walk your own property looking specifically for the red flags Chapter 17 describes, before you ever need to assess damage under stress. See the Safely Re-Entering a Damaged Home skill guide for the full walkaround and what to do once you find one.
- **Assess and reduce your home's actual earthquake vulnerability:** Beyond spotting red flags after the fact, the Securing Your Home Against Earthquake Damage skill guide covers what to check and fix beforehand, water heater strapping, cripple wall bracing, unsecured heavy furniture, so there's less structural damage to assess in the first place.

Self-Check: Ready for Stage 2?

You should be able to describe the ATC-20 red flags from memory and name at least one structural vulnerability you've already found and fixed on your own property.

Stage 2: Applied Practice (Competent)

Goal: move from knowing the theory to having actually built and slept in a shelter, and practiced a real structural walkaround.

Applied Practice

- **Practice the ShakeOut drop-cover-hold drill for real:** Actually perform the physical drill during the annual Great Utah ShakeOut, not just acknowledge the reminder email.
- **Build a real improvised shelter:** Using only a tarp and cordage (the University of Utah course's format), build a functional shelter in your own backyard or a local canyon and sleep a night in it under supervision or with a buddy. Cross-reference the Emergency Shelter Basics skill guide for site selection and insulation priorities before you build.
- **Practice a basic exterior structural walkaround:** On a building you have permission to assess (your own home, a friend's), practice the Chapter 17 red-flag walkaround as a timed, real exercise rather than a mental checklist.

Stage 2 Learning Path

Resource	Cost / Format	Notes
Tarp and cordage shelter-building materials	$30–$80	A ridgeline tarp and paracord, enough to actually build and sleep in a shelter per the practice exercise above.
University of Utah Outdoor Survival Skills (hands-on session)	Low-cost, single-session	continue.utah.edu. The same course as Stage 1, now for actual hands-on shelter-building practice rather than the intro overview.

Self-Check: Ready for Stage 3?

You should have completed the ShakeOut drill for real, and built and slept in an improvised tarp shelter at least once.

Stage 3: Self-Sufficiency (Proficient)

Goal: genuine independent competency, the actual skill level Chapter 7's Tier 2 and Tier 3 assume a household has. This stage involves real multi-day coursework.

Self-Sufficiency

- **Complete a multi-day wilderness survival course:** Boulder Outdoor Survival School (BOSS), operating in southern Utah since 1968, offers 7, 14, and 28-day field courses teaching shelter site selection, natural-material shelter construction, friction fire, and primitive water filtration; the 7-day Primitive Skills course is a genuine, in-depth entry point.
- **Build a real natural-material shelter, not just a tarp shelter:** Move beyond Stage 2's tarp-and-cordage shelter to constructing a shelter from natural materials alone, the core BOSS skill; this is a meaningfully harder and more valuable skill for a true no-gear scenario. See the Emergency Shelter Basics skill guide's debris-hut section for the starting technique.
- **Deepen structural assessment knowledge:** Study the actual ATC-20 field manual (not just the summary), and if feasible, connect with a structural engineer or contractor willing to walk through real damage-assessment logic beyond the basic red flags.

Stage 3 Learning Path

Resource	Cost / Format	Notes
Boulder Outdoor Survival School (BOSS), 7-Day Primitive Skills	~$1,500–$2,000 depending on program	boss-inc.com. Southern Utah, Aquarius Plateau; a nationally respected, Utah-based program.
ATC-20 Field Manual (Applied Technology Council)	Free/low-cost PDF	atcouncil.org/atc-20. The actual professional reference behind the green/yellow/red tagging system.

Northern Utah Note

BOSS is a genuinely notable regional resource: over 60 years of continuous operation in the exact terrain (southern Utah's high desert and canyon country) most relevant to a Wasatch Front household's realistic wilderness scenario, rather than a generic national survival program.

Self-Check: Ready for Stage 4?

You should be comfortable building a shelter from natural materials with minimal gear, and be able to explain structural damage assessment beyond the basic red-flag checklist.

Stage 4: Mastery & Teaching (Expert)

Goal: the ability to teach others reliably and coordinate shelter capacity at a community scale. This is the stage Chapter 7's Tier 4 (shared shelter for displaced members) actually depends on.

Teaching & Certification

- **Pursue longer BOSS field courses or a primitive-skills teaching track:** BOSS's 14- and 28-day field expeditions go well beyond the 7-day introduction into genuine wilderness self-sufficiency, and some programs offer instructor or apprentice pathways for those wanting to teach.

Community-Scale Practice

- **Coordinate shared shelter, not just personal shelter:** Cross-reference Chapter 7's Tier 4 guest/shelter capacity guidance; Stage 4 is where you help design or run an actual shared community shelter space, including the accessibility guidance from the Access & Functional Needs chapter.
- **Teach structural assessment triage to a group:** A short, practiced group walkthrough of the ATC-20 red-flag system, taught to several neighbors at once, is what actually lets a neighborhood self-triage after a major earthquake instead of waiting for scarce professional inspectors.

Stage 4 Learning Path

Resource	Cost / Format	Notes
BOSS 14-Day or 28-Day Field Expedition	$2,500–$4,000+ depending on program length	boss-inc.com. The genuine mastery-level version of the Stage 3 introduction.

Self-Check: Have You Actually Arrived?

The real test of Stage 4 isn't a title or a longer course; it's whether you've actually run a shared-shelter drill or taught at least one neighbor structural red-flag assessment they've since used independently.

A Suggested Learning Sequence

As a rough guide, not a requirement:

- **Weeks 1–2:** Stage 1: identify your home's structural red flags and register for the next ShakeOut.
- **1–4 months:** Stage 2: fix identified structural vulnerabilities and build and sleep in a tarp shelter.
- **6–18 months:** Stage 3: complete a multi-day BOSS or equivalent survival course, deepen structural assessment knowledge.
- **Ongoing:** Stage 4: consider an instructor credential if teaching is a real goal, and help run at least one real community shelter drill.

At a Glance: Shelter & Structural Safety Deep Dive

A single-page reference for planning purposes. This does not replace the detailed guidance above; use it to see how the four stages scale, and cross-reference against Chapter 7's tiers, which describe what a household needs to have and do rather than how skilled it needs to be.

Stage	Focus	Key Milestone	Primary Resource
Stage 1: Foundations	Core structural-safety knowledge, no hands-on requirement yet	Can describe ATC-20 red flags from memory	Great Utah ShakeOut
Stage 2: Applied Practice	Hands-on shelter-building and structural walkaround practice	ShakeOut drill completed; built and slept in a tarp shelter	University of Utah Outdoor Survival Skills
Stage 3: Self-Sufficiency	Independent skill over multi-day coursework	Built a natural-material shelter; deepened structural assessment knowledge	Boulder Outdoor Survival School
Stage 4: Mastery & Teaching	Teaching others, community/professional scale	Ran a real community shelter drill; taught a neighbor structural assessment	BOSS field expeditions