

MH 1708 Estimating Workflow – AI Training Guide (Trainer Notes Edition)

This enhanced version adds **Trainer Notes** for each module, aligning key timestamps, performance insights, and improvement prompts to support structured AI fine-tuning and estimator onboarding.

Overview

Purpose: Train AI systems and new estimators to understand, replicate, and optimize your full takeoff and pricing workflow using standardized logic, terminology, and structure.

Training Source Videos: 1. *Building the Second Floor – Framing & Design Insights* 2. *Second Floor Joist System Overview and Planning* 3. *Roof Takeoffs and Elevation Planning* 4. *Inputting Pricing for the 1708 Exterior Unit* 5. *MH 1708 Elevation A Siding Takeoff*

Trainer Focus: - Evaluate estimator speed, accuracy, and consistency across modules. - Highlight areas for automation or process improvement. - Annotate AI learning opportunities for visual, auditory, and behavioral cues.

Module 1 – Setup & Calibration

Video Reference: *Second Floor Joist System Overview* (0:00–1:45)

Trainer Notes: - **Timestamp 00:10–00:30:** Emphasize importance of setting correct scale early — include visual cue overlay for $\frac{1}{8}'' = 1'$. - **Timestamp 01:00–01:30:** Reinforce naming convention steps (Elevation A/B) — recommend macro for auto-tagging imported plan sheets. - **Improvement Cue:** Use a quick template check before scaling to eliminate double handling. - **AI Training Cue:** Tag mouse movement near scale bar and verbal confirmation of scale for reinforcement.

Performance Metric: Setup time under 3 minutes, zero re-scaling corrections.

Module 2 – Floor & Wall Framing

Video Reference: *Building the Second Floor – Framing & Design Insights* (00:00–08:00)

Trainer Notes: - **Timestamp 00:45–01:30:** Highlight efficient use of joist layout — consider pre-saved assemblies for 2x12 @16" O.C. - **Timestamp 02:00–03:00:** Note rimboard validation — recommend VBA button for “check rimboard consistency.” - **Timestamp 04:10–06:20:** Reinforce blocking logic — show example macro for 48" O.C. auto-fill. - **Improvement Cue:** Encourage batch labeling (joists, rimboard,

blocking) before hardware placement. - **AI Training Cue:** Annotate cursor behavior and voice commands (“add blocking,” “verify hanger”).

Performance Metric: Maintain takeoff accuracy within $\pm 1\%$ for deck square footage.

Module 3 – Roof Framing & Sheathing

Video Reference: *Roof Takeoffs and Elevation Planning* (00:00–20:00)

Trainer Notes: - **Timestamp 01:00–03:00:** Reinforce dual roof elevation logic (A/B packs) — potential automation using roof-pack templates. - **Timestamp 05:00–07:30:** Tag scaling correction — trainer should pause video and emphasize why confirming scale first avoids rework. - **Timestamp 08:00–12:00:** Call out FRT plywood placement; introduce visual overlay for fire-treated zones. - **Timestamp 16:00–19:00:** LS50 spacing demonstration — add diagram in training overlay for A/B/D/F spacing differences. - **Improvement Cue:** Convert LS50 spacing logic into a formula-driven macro linked to roof type. - **AI Training Cue:** Pair voice and mouse input for pattern recognition of pitch, soffit type, and hardware placement.

Performance Metric: LS50 and A35 callouts match plan spec within 100% accuracy.

Module 5 – Pricing Integration

Video Reference: *Inputting Pricing for the 1708 Exterior Unit* (00:00–48:00)

Trainer Notes: - **Timestamp 00:00–02:00:** Highlight export filter logic — show difference between interior vs exterior data cleanup. - **Timestamp 03:30–08:00:** Recommend pre-built Excel formula library for ReadyFrame, quantities, and extensions. - **Timestamp 18:00–24:00:** Note manual re-entry of repeat materials — suggest central “Material Map” reference workbook. - **Timestamp 40:00–45:00:** Verify consistency in unit pricing; trainer demonstrates Power Query merge of multiple takeoff sheets. - **Improvement Cue:** Introduce color-coded validation rule for missing pricing. - **AI Training Cue:** Label cursor hover events over pricing cells and verbal confirmations (“Exterior only,” “ReadyFrame at .45”).

Performance Metric: Manual entry time reduced by 30%; zero missing unit price cells.

Module 6 – QA & Continuous Improvement

Video Reference: Apply across all videos (post-export phase)

Trainer Notes: - Build a **QA Summary Worksheet** for every project: auto-log scale errors, naming mismatches, and hardware count variance. - **Timestamp 05:00+ in each video:** Capture AI learning moments where corrections occur (scale adjustment, hardware check). - **Improvement Cue:** Encourage on-screen error correction with commentary for reinforcement learning. - **AI Training Cue:** Flag corrections, highlight tool panels, and log before/after states for contextual model training.

Performance Metric: Zero missed hardware after final QA check; automated QA triggers generated via Power Automate.

Trainer Implementation Workflow

1. Watch each recording once fully, then annotate timestamps with errors or inefficiencies.
 2. Capture 5–10 microlearning clips (2–4 minutes each) with specific improvement demonstrations.
 3. Link each clip to AI tag categories (joist_logic , roof_pitch_detection , pricing_cleanup , etc.).
 4. Export transcript snippets with visual annotation for dataset training.
 5. Review every 10 projects to retrain AI and update QA dashboards.
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Long-Term Vision

- Each training video doubles as an AI dataset and an onboarding module.
 - Trainers refine efficiency per estimator by comparing timestamps and completion duration.
 - The AI will eventually detect and correct errors during live takeoff sessions.
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