A SUPERINTENDENT'S STEP-BY-STEP MANUAL — THE QUICK READ

Commissioning at a Glance

Turning over confidence, from day one to handover — condensed to the framework, the milestones, and the checklists.

THE ONE IDEA

Commissioning is the disciplined act of proving the promise. Installed is not operational — a building that looks done is not a building that is ready. How you finish is how you did, and the finish is decided on day one.

The Levels: Locks on a Canal

Each level lifts the project to the next stage of readiness through a gate. You cannot skip a lock — skipping doesn't save time, it pushes the cost downstream where it is more expensive and more visible.

Level	Name	The question it answers
0	**Plan It**	Do we know what success means?
1	**Factory Acceptance**	Can we verify quality before equipment ships?
2	**Site Verification**	Is the installation actually ready?
3	**Startup**	Can the equipment start and operate safely?
4	**Functional Performance**	Does the system perform as designed?
5	**Integrated Systems**	Do all systems work together under real conditions?
6	**Turnover & Operations**	Can the owner operate and maintain what we built?

The Eight States of a System

"Installed" is two states out of eight. Track every major system through all of them — and answer status questions with the state, not a vague summary.

Installed → Inspected → Started → Pre-functionally tested → Functionally tested → Integrated tested → Trained → Turned over

THE VISUAL CONTROL

Build a System Readiness Board on the trailer wall within the first 90 days. Rows are the major systems; columns are the eight states. Walk it weekly. If a system has not moved in two weeks, treat it as a blocked card — find the blocker and clear it.

The Milestone Checklists — Print and Walk

Tick an item only when it is verifiably true. These are the gates from notice to proceed to final completion.

Day 1 (Within 2 Weeks of NTP)

- ☐ Commissioning agent identified and named on the project org chart
- ☐ Commissioning plan read cover to cover; OPR and BOD read and understood

- ☐ Controls contractor identified
- ☐ Standing weekly commissioning sync on the calendar — NTP through handover
- ☐ Macro Takt plan includes commissioning as a named section
- ☐ Air handlers, building enclosed, and permanent power named as project milestones
- ☐ System matrix posted in the trailer

End of First Third — Topped Out and Tied In

- ☐ Commissioning plan, schedule, and team confirmed; kickoff complete or imminent
- ☐ CxA introduced — and lunched; AHJ relationship established, project walked together
- ☐ Controls contractor on board and working on BAS graphics
- ☐ Pre-functional checklists released; readiness checklists drafted for every major system
- ☐ Exterior commissioning agent engaged — performance mockups, not just material mockups
- ☐ Long-lead items (elevators, curtain wall, switchgear) tracked in detail
- ☐ FAT list built and witnesses confirmed

End of Middle Third — The Pivot

- ☐ PFCs being executed on installed equipment; floor-by-floor commissioning on the Takt plan
- ☐ Weekly reports, feedback, and meeting cadence locked; issues log answered within one working day
- ☐ Air handlers landed; vertical comms backbone live (temporary acceptable, paid for if needed)
- ☐ Path to air-on, permanent power, and FPT mapped on the Takt plan
- ☐ Sequence walk-through held with BOD, CxA, controls contractor, and owner
- ☐ System Readiness Board live on the trailer wall
- ☐ PEs and PMs pivoted to close-out at the two-thirds milestone

> **THE TWO-THIRDS PIVOT**
>
> At two-thirds you pivot: move the project engineers and PMs off coordination and onto close-out. Track submittals on a log, start warranty documentation, start collecting manuals, attic stock, and training videos. The team will resist. Pivot anyway — the final drive is not driving work in the field; it is getting documentation ready.

Final Third / Pre-Substantial Completion

- ☐ Yellow brick roads built — elevators, fire sprinkler, fire alarm, dampers, TAB, engineers' walks, state elevator inspection
- ☐ Day-by-day map for the remaining months printed and walked weekly
- ☐ Daily standup running — CxA, controls, MEP coordinator, superintendent
- ☐ FPT prerequisites complete: enclosed, clean, filters in, vertical controls connectivity, permanent power, TAB
- ☐ FPT, IST, and AT scheduled with no conflicts with fire alarm testing
- ☐ Punch list owner identified; systems manual compiled in real time, not at the end
- ☐ O&M manuals and attic stock collection underway
- ☐ Operators identified by name — walking the building two months before turnover
- ☐ Owner training scheduled by system, with a recording plan

Substantial Completion Gate

- ☐ Preliminary balancing report delivered; engineer sign-offs collected
- ☐ Architect's punch list issued; inspector green tags from the AHJ

- ☐ Fire alarm testing complete (floor and whole-building); sprinklers operational and inspected
- ☐ Elevators operational and state-inspected
- ☐ ADA and life safety walks complete; signage and egress confirmed
- ☐ FPT substantially complete; IST scenarios run and signed off
- ☐ Operations team trained — sessions recorded; systems manual delivered
- ☐ Temporary or full certificate of occupancy received

Final Completion Gate

- ☐ Punch list closed; building flush complete; final FPT passes complete
- ☐ Final commissioning report delivered; systems manual finalized and turned over
- ☐ Owner training delivered and recorded; attic stock turned over
- ☐ Warranties activated; post-occupancy support cadence active
- ☐ Seasonal and deferred testing scheduled
- ☐ Final certificate of occupancy received

The Rhythms That Carry It

Daily Commissioning Huddle — 15 Minutes, Standing

Every working morning during Levels 3–5, in front of the boards. Start on time, end on time, use names not titles. Problem-solving goes offline.

- Yesterday's closure — what tested, pass/fail, deficiencies closed
- Today's tests — prerequisites, trades on site, safety controls, witnesses
- Blockers — deficiencies, materials, decisions needed today
- Retests — closure verified, witness assigned
- Look-ahead — tomorrow's tests and what must be true by end of day

Weekly Commissioning Meeting — 60 Minutes

Same time, same day, every week, from NTP through handover — super, PM, MEP coordinator, controls lead, CxA, and the PE who owns the documentation. Walk the System Readiness Board and the deficiency log every time.

The Ten Failures — Trailer Wall Card

Walk it monthly. If the symptom shows up on your project, you know where to look.

Failure	Prevention
1. Starting too late	Day 1 moves. Commissioning on the Takt plan from the start.
2. Checklists as paperwork	PFCs are quality gates. Trade walks with the CxA. Pencil-whipping returned.
3. Skipping installation verification	Level 2 is a hard gate. Readiness checklists signed before any startup.
4. Starting before prerequisites	Readiness checklist signed before the startup tech is even scheduled.
5. Controls deprioritized	Controls is a commissioning trade, not a finish trade. On board by end of first third.
6. Poor documentation	Owner assigned at Level 0. Single platform. Weekly review.

7. Weak IST communication	Test lead, comms protocol, command center, stop-work authority clear.
8. Training the wrong people, too late	Operators named, on the project two months early, trained in the equipment rooms.
9. Ignoring unresolved deficiencies	Closure means verified by the CxA — not “someone said fixed.”
10. Confusing substantial with operational	Substantial completion is a date. The goal is operational readiness.

Commissioning is the disciplined act of proving the promise — own it personally, start it on day one, defend the gates, and speak in evidence, not opinion.