



**THORNTON**  
PLANNING ACADEMY

# Building, Permitting, Plan Review & Inspections

September 30, 2026

WELCOME

# Before Class: A Quick History of Building Codes

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**Watch the 7-minute video**

**Brief History of Building Codes and the International Code Council**

[youtu.be/JJ7U6zO-GIE](https://youtu.be/JJ7U6zO-GIE)

Come ready to connect code history to the projects happening in our homes today.

# Building Code History?

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## How Old are Building Codes?

**3,777 Years – 1750 BC**

**250 Years – USA started  
Code Compliance When  
We Were Founded**

**26 Years – ICC Founded  
in 2000**

# What We'll Learn Together

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- 01**      **Permit basics – Section A**      What needs a permit—and why

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- 02**      **Plan review – Section B**      What happens after you apply

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- 03**      **Inspections – Section C**      How safety is verified in the field

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# Warm-up: Test Understanding of the Permit Process?

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**Who has pulled a permit? And Why?**

**At your home**

**For My Job**

**Never**

## SECTION A

# Permit Basics & Why They Matter

Start with the purpose—not the paperwork.

# A Permit is Permission to Perform Regulated Work

- It connects a project to the codes adopted by the city (ICC 2024 Codes).
- It creates a review and inspection path before hazards are hidden.
- It documents that work was completed and approved.



**A permit is a safety process—not simply a piece of paper.**

# Permit or No Permit?

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What is your best guess for each project?

Water heater

New deck

Fence

# Permit or No Permit?

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Keep going—where would you draw the line?

Electrical panel

Roof

Shed

# The Answer Often Depends on the Project Details

**Water heater**

**PERMIT**

Replacement involves regulated plumbing/mechanical work.

**New deck**

**PERMIT**

Most of the Time. Structural and life-safety details must be reviewed.

**Electrical panel**

**PERMIT**

Electrical capacity and installation must be verified.

**Roof replacement**

**PERMIT**

Roofing work is regulated and inspected.

**Fence**

**DEPENDS**

Height, location, zoning, sight triangle and other rules can affect the path.

**Shed**

**DEPENDS**

Size (200 sq ft max), utilities, setbacks, and placement all matter.

# Four Common Myths Can Create Expensive Problems

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**“Permits are just a money grab.”**

Permits connect regulated work to safety review.

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**“Inspectors are trying to fail you.”**

Inspectors identify corrections before risks become lasting problems.

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**“My contractor handles everything.”**

Owners should still confirm permits and final approval.

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**“Nobody will know if I skip it.”**

Unpermitted work can surface during resale, insurance claims, or future projects.

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# Permits Protect People and Property

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- Fire and electrical safety
- Structural stability and safe exits
- Insurance and resale documentation
- Contractor accountability
- A clear record for future owners

**The cheapest time to correct a hazard is before it is covered up.**

# Spot the Problem

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**A deck is attached to the house, but the outer beam rests on loose blocks. What concerns you most?**

**Collapse risk**

**Appearance**

**Property value**



Multiple decks collapsed Saturday, Sept. 14, 2019, in Wildwood during the annual firefighters weekend. This is a photo of the aftermath, taken on Sunday, Sept. 15. Tim Hawk | NJ Advance Media for NJ.com

# Spot the Problem

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**An extension cord runs through a wall and powers several permanent fixtures. Would you trust it in your house?**

**Yes**

**No**

**Need more information**



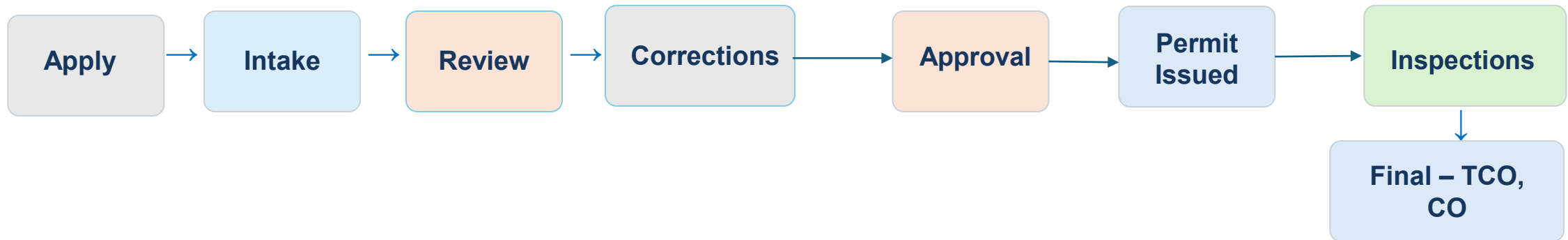
makeagif.com

## SECTION B

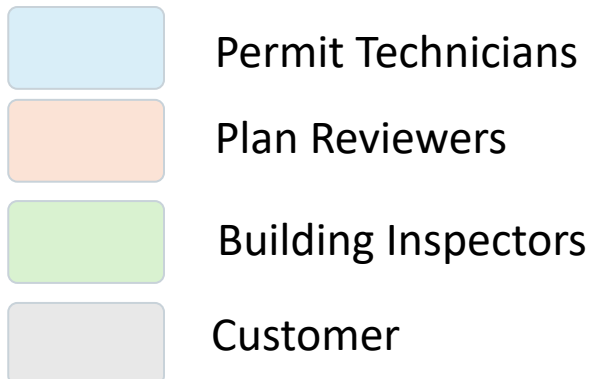
# Plan Review & The Customer Experience

Good plans answer questions before construction begins.

# Your Application Moves Through a Clear Sequence



Corrections are part of the process—not a rejection of the project.



# Different Disciplines Look at Different Risks

## Building

Structure, exits, life safety

## Electrical

Power, wiring, protection

## Plumbing

Water, waste, fixtures

## Mechanical

Heating, cooling, ventilation

## Zoning

Use, setbacks, placement

## Engineering

Site and infrastructure concerns

# Reviewers Need Enough Information to Verify Safety

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- Dimensions, locations, and the full project scope
- Safe exits, smoke alarms, and life-safety features
- Structural support and engineering where required
- Electrical loads, water drainage, and energy requirements
- Consistency across the application and drawings

**Clear plans reduce assumptions—and assumptions create correction comments.**

# Would you approve this?

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**A basement plan shows rooms and walls—but no dimensions, window sizes, smoke alarms, or electrical layout.**

**Approve**

**Request corrections**

**Reject permanently**

# Incomplete Plans Create Avoidable Delays

## Information gaps

- Missing dimensions
- Incomplete drawings | Wrong code year
- No site plan

## Coordination gaps

- Contractor information missing
- Required engineering not provided
- Review comments not fully answered

**Good plans get approved faster.**

# Inspections, Safety & Real-World Examples

Inspection turns approved plans into verified work.

# Inspectors Verify, Document, and Educate

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- Compare installed work with the approved plans
- Check code requirements at key construction stages
- Identify corrections while work is accessible
- Answer questions and explain what must change
- Document compliance and final approval

**The goal is not to stop projects—it is to help make them safe and successful.**

# Inspections Happen Before Important Work is Concealed

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|                     |       |                                  |
|---------------------|-------|----------------------------------|
| <b>Foundation</b>   | ————— | Before concrete or concealment   |
| <b>Framing</b>      | ————— | Structure and connections        |
| <b>Rough trades</b> | ————— | Electrical, plumbing, mechanical |
| <b>Insulation</b>   | ————— | Before wall finishes             |
| <b>Final</b>        | ————— | Complete, safe, ready for use    |

# Here's What to Expect on Inspection Day

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1

## Schedule

Request the correct inspection.

2

## Prepare

Plans, access, and work are ready.

3

## Review

Inspector checks visible work.

4

## Result

Pass or correction notice.

5

## Reinspect

Correct items and request return visit.

# Common Failures are Usually Specific and Correctable

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1 Missing GFCI (Ground Fault Circuit Interrupter)

2 Improper stair geometry

3 Missing smoke alarms

4 Incorrect framing connections

5 Unsafe gas piping

## Inspector for a Minute

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**A finished basement bedroom has no compliant emergency escape and rescue opening. Pass or correct?**

**Pass**

**Correction needed**

**Fail Permanently**

## Inspector for a Minute

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**A new receptacle near a sink has no Ground Fault Circuit Interrupter (GFCI) protection. Pass or correct?**

**Pass**

**Correction needed**

**Depends on paint color**

# Inspections Catch Hazards Before They Become Emergencies

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## Deck connections

A weak connection can be corrected before a collapse.

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## Electrical hazards

Unsafe wiring can be found before walls conceal it.

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## Gas leaks

Testing can identify a leak before occupancy.

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## Structural changes

Altered framing can be evaluated before finishes are installed.

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# Three Habits Make Projects Smoother

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## Ask early

Contact the city before work begins or materials are purchased.

## Plan clearly

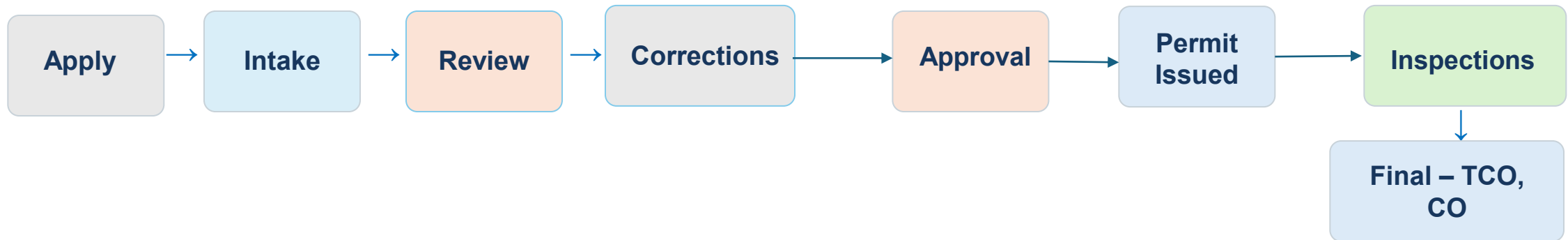
Submit complete, coordinated information.

## Inspect on time

Schedule before regulated work is covered.

**Permits protect lives, investments, and the success of the project.**

## Do you have any questions regarding the permitting process?



**Thornton Building Inspection | 303-538-7250 | [thorntonco.gov](http://thorntonco.gov)**

We are here to help. Call or email if you have any questions