



# City of Apache Junction

## Development Services Department



### POLICY AND PROCEDURE

## Concealed Construction Verification Guidelines

### PURPOSE

To provide minimum standards for verification of construction concealed without required inspections. This could be the result of work done without the required permits; or if a permit was properly issued, could be the result of not having, or not passing, required inspections and continuing work that conceals areas or work required to be inspected.

### GENERAL

It is the intent of this policy to establish reasonable compliance with approved plans, specifications, and applicable codes via independent verification and selective inspection. If selective inspection or independent verification indicates code compliance, then the remaining concealed construction is assumed to be correct.

It is also the intent of this policy to provide a reasonable method to verify concealed construction without endangering staff. Staff shall not be expected to enter into confined spaces as defined by OSHA (this does not apply to attics or crawl spaces that have code required access) or to climb steep sloped roofs (pitch greater than 5:12), without proper fall protection.

This policy specifically applies to projects constructed according to one of the following Apache Junction Technical Codes:

- Residential Code- where work is done on a one- and two-family dwelling,
- Building Code- specifically, the conventional construction criteria as described in Chapters 18 Soils and Foundations and 23 Wood, of the Building Code, or
- Plans designed, stamped and signed by a Registered (licensed) Design Professional ("RDP").

All construction concealed without required inspections shall require independent verification of code compliance in addition to any observation reports provided by a project engineer or architect. Self-certification photographic or video graphic information shall not be accepted in lieu of independent verification.

If the permit application is submitted under stamp and signature of an RDP, the verification methodology shall be proposed by the RDP, and approved or rejected by the Building and Safety Manager or their designee. The proposed verification plan shall include a non-destructive testing method, designation of materials to be removed and exposure of structural elements for inspection by City inspection personnel. The proposed verification plan shall not depend solely on observation reports provided. Photos submitted by an RDP in conjunction with a report that clearly identifies the location of the work, materials, and installation method may be accepted to supplement a report of inspections. Inspection of the electrical, mechanical, and plumbing systems for professionally designed buildings shall comply with PROCEDURE "C" of this policy.

If the project was not designed by a licensed professional, verification of concealed construction shall comply with the applicable requirements of PROCEDURE "C" of this policy.

### AUTHORITY

This policy is created per Apache Junction Division of Building Safety and Inspection Administrative Code § 7-1-7 (A).

### PROCEDURES

A. When Building or Code Division personnel identify concealed construction, they shall inform the responsible party of this policy.

At the time of permit issuance, permitting staff shall direct the responsible party to immediately request a rough-in inspection, or the applicable inspection type based on the project and the progress at the time of the "Stop Work." During the inspection, the Building Inspector will meet with the responsible party and discuss areas requiring exposure and verification per PROCEDURE "C" of this policy.

B. If construction has proceeded without inspection, or if an inspection is missed and construction is concealed during the course of a permitted project, the Building Inspector shall write a correction notice informing the responsible party of this policy. Verification shall be per PROCEDURE "C" of this policy, as applicable.

C. "PROCEDURE C"- The following minimum verifications shall be required.

1. For foundations and slabs or retaining walls poured without required inspections:
  - a. A non-destructive test and report shall be required from an independent materials testing company and provided at the expense of the responsible party. At a minimum, three locations must be examined and/or at least one enlarged pad for point loads must be verified. The non-destructive testing report shall sufficiently detail and verify the placement and size of reinforcing steel, footing depth and width. The locations examined shall be chosen by the independent materials testing company and submitted as a deferred plan check submittal in accordance with the Apache Junction Division of Building Safety and Inspection Administrative Code § 7-1-6 (O) (2) Addenda and Revisions to Submittal Documents

OR

A licensed professional may propose an alternative method of verification for construction. The verification method shall be subject to approval by the Building Official or designee.

2. For wall bracing anchors, anchor bolts, seismic anchorage systems, or other embeds, installed without required inspections:
  - a. Verification that foundations and hold down devices are installed per plan by uncovering at least 25% of the affected area, or 25% of the required embeds/anchors- those hidden behind wall finish material like gypsum board.
3. For slabs on grade requiring a moisture barrier that have been poured without required inspections, installation of a listed surface treatment or paint on moisture barrier is required.
4. For braced walls, metal straps, and connectors (like joist hangers, truss hold-downs, etc.) concealed without required inspections:
  - a. Visual verification of at least 25% of the concealed construction shall be required.

OR

A non-destructive test in at least three locations may be accepted in lieu of visual verification of metal straps and connectors.

OR

A licensed professional may propose an alternative method for independent verification of concealed shear walls.

5. For building envelope, insulation requirements or energy code requirements- blower-door and/or thermal imaging scans may be required.
6. For gypsum or wallboard used as a fire-rated assembly or wall bracing:
  - a. Verification shall be via the use of a nail locator magnet or the installation of additional fasteners and compliance with approved assembly.
  - b. Verification of wallboard thickness and material type shall be via removing a portion of the assembly to expose at least one wallboard grade and thickness stamp.
7. For plumbing and mechanical systems concealed without required inspections.
  - a. Testing per the currently adopted Plumbing Code, Mechanical Code and Fuel Gas Code shall be required for building sewer systems, water distribution systems and gas distribution systems installed and concealed

without required inspections. Three key locations shall be exposed as selected by the Building Inspector for verification of material size and configuration.

- i. Plastic drainage piping systems like ABS and PVC **cannot** be tested with air but must be tested with water and must maintain a minimum 10-foot head of water for 15 minutes. (ABS/PVC/CPVC pipe can explode and shatter into shrapnel when tested with air.)
  - ii. Water lines shall be tested at the working pressure, or air at 50 psi for 15 minutes (air not allowed for testing pvc/cpvc).
  - b. For commercial under-slab mechanical and plumbing, or process waste systems, video graphic verification provided by a licensed contractor of the as-built condition shall be required.
  - c. Visual spot verification may be allowed for partial systems or repairs concealed without required inspections. *The Building Inspector may require revealing concealed components if exposed components are not code compliant.*
  - d. For commercial kitchen exhaust ventilation systems (grease hoods) or other required hazardous exhaust systems (vent hoods) an air pressure test will be required for any concealed or fire wrapped duct that was not visually inspected.
  - e. Exhaust ducts for environmental exhaust (bath fans, nail polishing stations) must be verified to be continuous to the exterior.
8. For electrical systems concealed without required inspections:
- a. For commercial structures, industrial and multi-family dwellings, a licensed electrician shall be on-site and the installation shall be de-energized prior to inspection. For single Family dwellings and agricultural buildings, an electrician may be required on-site at the discretion of the Building Inspector.
  - b. All electrical panel and splice boxes shall be opened for inspection for the entire systems installed without required inspections. The Building Inspector shall verify box fill and ground system bonding via selective inspection. The Building Inspector has the option of requiring the removal of electrical receptacles or switches as required. Bonds to metal piping systems shall be exposed and inspected. *Ufer grounds shall not be accepted if installed in a foundation that was constructed without required inspections.*
  - c. The Building Inspector may allow visual spot checking to verify code compliance of partial systems of repair work concealed without required inspections.
  - d. Electrical and bonding systems installed in conjunction with pools, fountains, and similar installations shall be tested by a licensed electrician and a report stating the wiring method used shall be provided that contains resistance readings and a statement of suitability of the system. The continuity resistance shall not exceed 25 ohms.
9. For grading and fill material placed without required inspections:
- a. Any fill material placed and compacted without required inspections that is proposed to support a structure, shall be considered “engineered fill” and shall require design and verification proposed by a licensed engineer. The licensed engineer shall propose a method for verifying keyways and benching. Compaction testing shall be per ASTM D 1557. A final report stating the project has been constructed in compliance with all plans and specifications shall be required per the currently adopted codes and ordinances.
  - b. Shallow fills less than 12 inches deep, less than 100 cubic yards and not intended to support a structure shall be considered “regular grading” and subject to visual verification by Building Inspectors.

D. If any test, visual verification or report determines that non-compliant conditions exist, then 100% of the concealed item shall be revealed or exposed for inspection.

1. If code compliance cannot be achieved by installation or modification of the installed components, the responsible party shall remove and replace the non-compliant component.

OR

As an alternative, the responsible party may recommend an alternative method for achieving code compliance via engineering analysis provided by a licensed professional.

E. Please note that the Superstition Fire and Medical District, Superstition Mountain Community Facilities District #1, and Pinal County Health Department may have additional, or different requirements for assuring that construction meets their respective code requirements.