



INSPECTION PROCEDURES

CITY OF TWIN FALLS
BUILDING SAFETY DEPARTMENT
Residential Footings & Foundations

CODE: 2018 IRC, IBC/ACI-318

ISSUE DATE: July 1, 2021

SUBJECT: Residential Footing & Foundation Inspection Procedure

This Inspection checklist may be used as basis for the acceptance or rejection of any concrete foundation. Section 402.2 of the International Residential Code (IRC) references the American Concrete Institute (ACI) 318 as the standard to follow for concrete. It is the intent of this procedure to closely follow the ACI 318, Standard Specifications for Footing and Foundation typical construction.

Please verify that the following items are complete before scheduling ANY footing or foundation inspections.

Permits and Plans

- Job address shall be posted in a visible location. (R319)
- Permit and approved plans are on site and accessible to the inspector. (R106.3.1 and R105.7).
- Check approved plans for building height and/or setback restrictions.

Location on Property

- Verify that the footings and foundation are located within the required setbacks.
- Footings and foundation that are not located within the minimum setbacks outlined on the stamped, approved set of plans shall result in a “failed” inspection. (R106.3.1)
- String lines are required to be install for inspection to be performed; if they are not installed at the time of inspection, the contractor should already be setup to run the string lines at the request of the inspector. (R109.1.1)

Footings

- Provide a safe and clear walking path to site and formwork.
- All Footings to be constructed per the approved set of plans. If the plans call out for two rows of #4 bar in the footing, then that is what should be installed. If builder wants to go with prescriptive method, then a change order will be required to be submitted to the building department for review. (R403)
- Footings project beyond the face of the foundation wall at least 2 inches, but not more than the thickness of the footing. (R403.1.1.) (Note: Engineering will be required for any footings that don't meet this minimum and any/all reinforcement dowelled into the footings will need to be properly drilled and epoxied with approved materials and depths as specified by the E.O.R)
- Exterior footings shall be placed not less than 24 inches below undisturbed ground surface. (R403.1.4) Note: Footings located 12inches below undisturbed ground surface with 12 inches of cover for a total of 24inches is acceptable with Building inspector approval on backfilling techniques.
- All Footing reinforcement shall have the proper clearances to earth at time of inspection. 3 inches off ground. (ACI 318 20.6.1.1-4)
 - 3 inches when cast against and permanently exposed to ground.
 - 2 inches for No. 6 through No. 18 bar when exposed to earth or weather.
 - 1.5 inches for No. 5 or smaller bar when exposed to earth or weather.

- Minimum lap splices shall be 20 inches for #4 reinforcement. (Table R608.5.4(1))
- If plans show that isolated footings are required but are not being done at the same time as footing or foundation, a separate isolated footing inspection will need to be scheduled so location, size, reinforcement and any column/post connections verified prior to cover. **(Note: Isolated footings shall have inspections scheduled and approved prior to any framing inspections being approved. Contraction joints ¼ the slab depth may be accepted with building inspector approval.)**
- Footings do not bear on frozen soil. (R403.1.4.1)
- Rebar to be free of loose scale, rust, ice, mud, oil and/or other materials. (ACI 318)
- The building code requires that the minimum compressive strength of concrete for footings be 2500 psi.

Foundation

- The foundation wall reinforcement and sizing shall be in accordance with the approved plans.
- Top of foundation wall shall extend above elevation of street gutter at point of discharge not less than 12 inches plus 2%. (R403.1.7.3) with the top of the wall projecting a minimum of 6 inches above finished grade. (R404.1.6)
- Foundation wall must be located on the footing with a minimum 2-inch projection on either side of the wall. If wall is hanging off the footing with no projection, then an engineer of record must evaluate and assign a fix prior to an inspection being performed. If inspection has already been scheduled, the contractor will call and cancel. Once the fix has been established the engineering will need to be onsite at time of inspection.
- Anchor bolts shall extend not less than 7 inches into concrete. (R403.1.6) Anchor bolts are sized and spaced per the structural plans for shear walls. (see approved set of plans)
- The required hold-downs are placed per approved plans and manufacturer's installation requirements. Note: Hold-down straps and embedded bolts for hold-downs MAY NOT BE WET SET; they shall be tied in place at time of foundation wall inspection.
- Crawl space vents incorporated into foundation walls are properly sized, spaced and installed at time of inspection Per (R408).
- Surface drainage is away from the foundation walls a minimum of 6 inches for the first 10 feet. On narrow lots, provide the slope (a minimum of 2 percent) to drains or to approved swales. (R401.3, Exception.)

Cold and Hot Weather Requirements

- Concrete being placed during freezing or near-freezing weather complies with the following (ACI 318 26.5.4):
 - Adequate equipment provided for heating concrete materials and protecting concrete during freezing or near-freezing weather.
 - Concrete materials and reinforcement, forms, fillers and ground with which concrete is to come in contact is free from frost.
 - Frozen materials or materials containing ice not being used.
- **Concrete being placed during hot weather complies with the following (ACI 318 26.5.5):**
 - Proper attention is given to ingredients, production methods, handling, placing, protection and curing to prevent excessive concrete temperatures or water evaporation that could impair the required strength or serviceability of the member or structure.

SIGNATURE: Matthew Long C.B.O

DATE: July 1, 2021