



This checklist covers residential inspections for single-family homes, duplexes and associated accessory buildings. The checklist details the most common deficiencies that are detected by field inspectors and was compiled to assist customers in reducing the number of re-inspections and to minimize costly repairs or delays.

GENERAL INFORMATION

The Construction Codes includes the following model codes with local amendments:

- International Building Code (IBC) - 2021
- International Residential Code (IRC) - 2021
- National Electric Code (NEC)- 2020
- International Plumbing Code (IPC) - 2021
- International Mechanical Code (IMC)- 2021
- Town of Sunnyvale Zoning Ordinance - Current
- International Fire Code (IFC)- 2021
- International Energy Conservation Code (IECC) - 2021
- International Fuel Gas Code (IFG) – 2021

CONSTRUCTION HOURS ARE AS FOLLOWS:

Monday – Friday: 7am to 7pm

Saturday: 8am to 7pm

NO SUNDAYS AND NO FEDERAL HOLIDAYS

TO REQUEST AN INSPECTION:

Requests received before 4:00 p.m. (Monday-Friday) will normally be inspected the following workday.

During periods of heavy workload, we are unable to conduct all of the inspections scheduled. These "carryovers" are automatically scheduled and prioritized for the next working day.

TO SCHEDULE AN INSPECTION ON LINE:

You will need your **Permit Number** and Entity Number which is listed on the receipt for the permit.

- www.townofsunnyvale.org
- Town Departments/Building Inspections
- Middle section: Building Inspections » Online Permit and Inspections > [Home Portal](#)
- Click on permit icon to begin
- Search by address or permit #
- Click choose an inspection
- Enter all pertinent information, in comments section type of inspection
- Process Request with submit button
- You will receive a confirmation email. Please retain for future use.

PLEASE PROVIDE THE FOLLOWING INFORMATION AT THE JOB SITE:

- Posted property address
- Safe access for the inspector: unlock gates, remove dog(s) from the area (some of our staff members have been bitten by dogs that "don't bite")

TO SPEAK WITH AN INSPECTOR:

Call (972) 203-4188. Staff will take your message and relay it to the inspector for a return call. Be sure to leave your name, the name and address of the project, and the nature of your request.

GUARANTEED SECOND OPINION:

Field Supervisors will provide assistance with resolving issues. If the field supervisor is out of the office, leave a (non-pager) phone number and the assigned supervisor will call you no later than the following morning. Be sure to give us your name, the name and address of the project, the field inspector's name if known, and the nature of your issue.

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ALL INSPECTIONS

- Permit posted on-site
- Address posted on-site
- City reviewed plans - including plot plan

FOUNDATION INSPECTIONS

Note: Inspection to be performed prior to pouring concrete

Location

- Have property corners located and marked clearly
- Layout shall match the plans. No walls, fireplaces, bay windows, etc. within 5' of property line unless one hour fire rated and approved by Zoning. For pre-existing platted subdivisions, the minimum building setbacks shall comply with the zoning district requirements.

Footings

- Minimum depth into undisturbed soil per plans or soil engineer's report when located in fill material
- Minimum width and thickness of pour as per plans
- Steel reinforcing
- Trenches are clean and square, no loose material or debris
- A #4 copper grounding electrode "ufer" at least 20' long and secured to bottom 2" - 4" of the trench or one of the approved alternatives in the IRC or NEC

Stem Walls

- Forms complete and secure
- Minimum width as per plan
- Minimum height above finish grade
- Vertical steel placement for masonry walls
- Anchor bolt placement for framing
- Horizontal steel on plans
- We recommend that you block areas for the plumbing penetrations rather than damaging it later with a sledgehammer

Interior Bearing Footings

- Located as per plans
- Minimum depth, width, and length per plan
- Anchor bolt placement as required

UNDERGROUND/UNDERFLOOR (SOIL)

Note: Inspection to be performed prior to covering with backfill

Water Service Piping

- Use approved materials that are prescribed in the code or listed for use
- When a metallic water service also serves as the grounding electrode, the replacement pipe must be metallic OR drive a ground rod
- Water service size per IRC, but not less than $\frac{3}{4}$ "
- Minimum burial depth is 12"
- Water meter must not be in driveway
- If the water service contains nonmetallic pipe, a tracer wire (#18 gauge minimum) must run with the water service piping from the water meter, ending at the house riser and shutoff

Sewer Pipe

- 12" minimum burial depth is required
- Maintain a minimum $\frac{1}{4}$ " slope per foot of run for pipe sizes 2" and smaller. $\frac{1}{8}$ " slope per foot of run for pipe sized 3" - 6"
- Cleanout for each 100' and direction changes >45 degrees
- Use a backwater valve when flood level of fixture is below the upper manhole rim
- Lay the piping on a firm bed and backfill only with approved materials

Drain & Vent Piping

- Maintain minimum $\frac{1}{4}$ " slope per foot
- Use fittings and materials approved for the purpose
- Use cement grout around the tub/shower drain at the slab
- Do a minimum 5' high water column pressure test on the drain/waste/vent system and leave on for the inspection
- Size the D.W.V. piping per IRC Chapters 30, 31
- Install cleanouts per IRC/may be required on second floor

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- Repairs to defective parts or connections must be made by replacing the part
- Only 1 and 2 fixture unit fixtures may drain into the vent of another fixture. Use next size piping for the "wet vent"

Water Piping

- No joints allowed under the slab
- Wrap or sleeve penetrations through slab
- If piping occurs in the foundation area, you must provide a minimum ½" protection from settlement
- Backfill only with approved materials

MASONRY INSPECTION

Note: Inspection is to be performed prior to grouting cells

- Vertical and horizontal reinforcing steel shall be inspected in place prior to grout
- Use approved lintels to support masonry over wall openings and at masonry over wood
- Install a bond beam or equivalent with properly spaced anchor bolts to secure the framing structural members
- Exterior wall ties installed on first and second floors

BLANKET INSPECTION (pre-drywall)

Note: During this inspection, the rough framing/plumbing/mechanical and electrical work is checked. Complete the work, and then call for inspection. Do not insulate, drywall, or cover until approved.

Structural:

- Fasten the framing members per IRC nailing schedule
- Studs shall be continuous and not spliced from floor-to-roof or ceiling
- Brace the gable ends with diagonal 2 X 4 etc., at the ceiling plate
- Firestop all wall spaces, chases and recesses
- Use only graded/stamped lumber
- Brace walls at corners and every 25 linear feet with plywood, diagonal bracing, etc.
- Provide adequate attic ventilation per IRC
- Bored holes and notch cuts shall not exceed IRC limits
- Use metal framing anchor at all truss and rafter bearing points

- Minimum stair headroom is 6'8" above the tread nosing. Minimum width is 36". Check for proper rise and run of steps. Landing length shall be as long as the stair width (36" minimum)
- All escape and rescue windows on floors above and below grade shall have a net clear opening of 5.7 square feet minimum. Escape windows on floors at grade shall have a net clear opening of 5.7 square feet minimum. The minimum opening width 20", minimum opening height is 24". The finished sill height not more than 44"
- Use headers or beams over all exterior walls and bearing walls
- Anchor bolts required within 12" of framing plate ends or splices and at 6' on center. Minimum 2 anchor bolts per plate.
- Truss repairs shall be engineered and all trusses shall be number stamped with a truss plant I.D.
- Safety glazing as required within 5' of pool water's edge; by doorways, shower door, tub and shower enclosures, etc. For special requirements, see IRC Section R308
- Garages must have 19' minimum depth for zoning compliance
- No door or window openings allowed from a garage or carport to a sleeping room
- Check windows for required LI-Factor and solar heat gain coefficient (SHGC) values

Electrical:

- Conductors shall be properly color-coded.
- Grounding = bare or green; neutral = white or gray; current carrying conductors= red, black, blue, etc.
- Minimum of two 20-amp circuits required for small appliance receptacles serving kitchen counters
- Protect receptacles at kitchen counters, bathrooms, on the exterior and in the garage with a ground-fault circuit interrupter GFCI, all other receptacles shall be AFCI protected
- Maximum wall spacing for receptacles is 12'. Begin within 6" of doors. Each isolated wall space over 2' wide needs a receptacle.
Foyers
 - 60 sq. ft. shall have outlets on walls > 3'
- Install lighting outlets for habitable rooms. Bathrooms and kitchens must have lighting outlets while other rooms may use switch-controlled receptacles
- Check thresholds at entry and other exits for proper clearances
- Protect wiring that passes through framing member when within 1 ¼" of the edge. Use 1/16" minimum thick metal plate

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- Protect wiring within 6' of a scuttle hole
- Support n/m cable within 12" of an outlet box and a 4' 6" intervals
- Use only approved boxes and materials in a manner as designed for the purpose
- 20-amp minimum circuit for bathrooms receptacles, GFCI protected
- Boxes shall be of sufficient size to provide free air space for conductors and devices as per National Electrical Code
- Grounding conductors shall be terminated by screws, clips, or other approved means
- Bond interior water and gas piping per NEC 250.104
- Fill unused openings in boxes as a fire precaution
- Strip jacket/sheathing off the conductors in boxes for the inspection and terminate the ground wires
- Use only approved boxes at fire walls, to retard the spread of fire
- Keep incandescent lights 12" away from storage area in a closet, 6" for fluorescent and LED
- All outlets in bedrooms, including plug, lighting, and smoke detector outlets, shall be connected to an arc-fault circuit breaker

Add: All receptacles shall be Tamper Resistant, exterior receptacles shall be Weather Resistant

Plumbing:

- Do a top-out 10' water test inspection and a shower liner test
- Water supply system shall be pressure tested
- Full way valve required at inlet to water heater and to the dwelling unit
- Piping shall not be subjected to undue stress
- Protect piping from nail damage - studs, rafters, joist, etc.
- Protect piping from corrosion at concrete and masonry penetrations

- Terminate vent pipes at least 6" through the roof and at least 10' from air intakes, such as evaporative coolers, operable windows
- Each trap arm must be vented
- Do not exceed allowable trap arm length
- Drainage piping must slope ¼" minimum
- S-traps are prohibited. The trap "weir" cannot be higher than the top of the opening at the vent
- Minimum side clearance to center of toilet is 15".
- Minimum 21" clearance to front
- Keep dissimilar metals from touching

Mechanical:

- Use only approved methods and materials
- Properly support ducts and equipment
- Ducts must be installed per manufacturing specifications and Manuals S, J and D if applicable and meet energy code requirements
- Provide "catwalk" for access to the mechanical equipment working platform
- Ducts shall be sealed with approved sealants.
- Duct tape is not approved
- Screens not permitted on dryer duct

Gas Piping System:

- Use only approved materials and fittings
- No gas piping shall be installed in or on the ground under a structure, unless sleeved.
- Size piping per IRC (BTU) demand table
- Test the pipes for leaks during construction
- Do not install fuel-burning equipment in bathrooms, bedrooms, or in compartments leading into such areas
- Provide 3 lb. test at final for all gas piping. Gauge to be 1/10 lb increments and hold pressure for 15 minutes.
- Provide required combustion air ducts, vents, etc., from outside (fresh) air. Minimum two openings, 50 square inches each

FINAL INSPECTION

Note: Inspection to be performed when structure is complete and ready to occupy

- Have a permanent address at project visible from the street

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- Water meter must be installed and not in driveway
- Sidewalk cracks and damage have been repaired
- Construction materials and debris are removed from site and right-of-way
- Civil Engineering holds have been released
- Hillside and Grading/Drainage projects require prior approval from site planning. 3 sets of as built plans at time of final inspection are required
- Vacuum breakers on hose bibs
- Install all cleanout plugs and caps
- Extend sewer pipe cleanouts to finish grade
- Minimum side clearance to center of toilet is 15" minimum 24" clearance to front
- Install all electrical fixtures and devices including tamper proof receptacle covers and all fixed appliances
- GFCI protect garage, outside, and sink receptacles
- AFCI protect receptacle branch circuits
- Properly phased multi-wire circuits so the neutral does not become overloaded
- Keep incandescent lights 12" away from storage area closet; 6" for fluorescent
- No hanging fixtures shall be located within 3' horizontally or 8' vertically above a tub
- Bond/ground all light fixtures as required
- Final grading complete, retention, etc.
- Provide specific identification and labeling of all circuit breakers in the panel. For example: small kitchen appliances on E wall, lighting in master bedroom and W guest room, range, dryer, etc.
- Outlets in wet locations, outside and not under an eave or roof, shall have an enclosure that protects the outlet when the plug is attached to the outlet (protects plug and cord) and shall be Weather Resistant type
- Provide all special inspection reports
- Provides all certificates at final. Energy, post tension, termite, insulation, stucco, etc.

Exit Safety, Security:

- Stairway guardrails shall be designed so that 4" sphere will not pass through

- Stairway headroom 6' - 8" minimum measured vertically above the tread nosing
- Open risers are permitted, providing that the opening between treads does not permit the passage of a 4" diameter sphere.
- 1 ½" minimum space between wall and handrail. Handrail must be approved shape.
- The top of the handrail shall be between 34" - 38" above the sloped plane adjoining the tread nosing.
- Landings shall be at least as long as the width of the stairs and 36" minimum
- No door or window openings allowed from a garage or carport to a sleeping room
- Every sleeping room shall have a door or a window leading directly outside for egress and escape
- All escape and rescue windows on floors above and below grade shall have a net clear opening of 5.7 square feet minimum. Escape windows on floors at grade shall have a net clear opening of 5.0 square feet minimum. The minimum opening width 20", minimum opening height is 24". The finished sill height not more than 44"

Other Life Safety Items - Miscellaneous:

- Fireplace hearth shall extend 8" to each side and 16" in front of the firebox. If over 6 square feet of opening, extend 12" to each side and 20" in the front
- Use drywall to protect the attic access openings in garages (scuttle holes) per City of Phoenix requirements
- Smoke detectors shall receive their main power from the building wiring, have battery back-up and be interconnected so that if one sounds, all the detectors alarm. They shall be installed in the appropriate locations including all sleeping rooms. Smoke detectors shall be installed per the new code in every home undergoing an interior remodel (no matter how small)
- The code allows specific exception for approved listed wireless interconnected smoke detectors.
- Safety glazing as required within 5' of pool water's edge; by doorways, shower door, tub and shower enclosures, etc. For special requirements, see IRC Section R308
- Protect appliances in garage from vehicle impact
- Energy Code Compliance Certificate posted in the electrical panel
- Final paperwork,
 - Final grade survey, irrigation verification form, Backflow, Energy Compliance Certificate