



RESIDENTIAL CONSTRUCTION PACKET

All plans, permits, and inspections are being reviewed under the
2018 International Codes

ALL PLANS NEED TO BE 11X17 ONLY

127 N. Collins Rd.
Sunnyvale, Texas 75182
972-203-4188



RESIDENTIAL CONSTRUCTION INFORMATION PACKET

Revised: March 2018

TABLE OF CONTENTS

A. GENERAL REQUIREMENTS.....	2
B. GENERAL INSPECTION NOTES	3
C. RESIDENTIAL INSPECTIONS REQUIRED	4
D. RESIDENTIAL INSPECTION REQUIREMENTS	4
1. TEMPORARY POWER POLE.....	4
2. FLATWORK.....	4
3. PLUMBING ROUGH	5
a. Water Lines.....	5
b. Sanitary Sewer	6
c. Gas Line.....	6
4. FOUNDATION.....	6
a. Post Tension.....	6
b. Rebar.....	7
5. FRAME, MECH ROUGH, ELECTRIC ROUGH, PLBG TOP-OUT	8
a. Framing.....	8
b. Mechanical Rough.....	10
c. Electrical Rough	10
d. Plumbing Top-Out.....	11
6. ENERGY INSULATION.....	13
7. UTILITY FINAL.....	13
a. Electric	13
b. Gas	13
8. FINAL INSPECTIONS.....	14
a. Building.....	14
b. Mechanical.....	14
c. Electrical	15
d. Plumbing.....	15
e. Energy	16
f. General.....	16

A. GENERAL REQUIREMENTS

1. Plan Review/Permit Submittal

All plan submittals that are not master plan submittals must contain the documents listed below. Regular permit applications will generally be reviewed within ten (10) working days.

Two (2) complete sets of drawings (11x17 only) that include the following:

- a. Site plan indicating all property lines, easements and setbacks of the proposed building.
- b. Window and door sizes.
- c. Elevation drawings showing exterior wall construction and masonry percentage calculations.
- d. Structural foundation drawing stamped by a professional engineer licensed by the State of Texas. (Contractor)
- e. Original letter from the same engineer that designed and sealed the foundation plans stating that the foundation was designed for the soil conditions on that particular lot. The letter must also state that the foundation design criteria complies with the minimum standards required by the 2018 International Residential Code.

2. In addition to the above paper drawings, contractors must submit electronic PDF files of the following drawings. Files can be submitted via thumb drive or CD. A separate file is required for each of the drawings listed below:

- a. Permit Application
 - b. Energy Review (RESCheck, IC3, HERS, Residential Energy Compliance form, etc.)
 - c. Engineered foundation letter (must be sealed by PE).
 - d. Engineered foundation design (must be sealed by PE).
 - e. Engineered shearwall design (must be sealed by PE).
 - f. Exterior elevations indicating the materials used on all exterior walls. Exterior walls must have ninety percent (90%) masonry excluding windows and doors. Stucco and fiber cement boards can only count toward forty percent (40%) of the masonry required. Chimney's 100% brick.
 - g. Floor plan.
 - h. Electrical plans indicating the location of smoke and carbon monoxide detectors.
 - i. Site plan.
2. No construction, other than setting form boards and lot grading, may begin until a building permit has been issued.
 3. No tracked vehicles will be allowed on streets and alleys after a subdivision has been accepted.
 4. Instruct all subcontractors and their employees to park in such a way that emergency vehicular traffic will not be obstructed, i.e., fire trucks and ambulances. **(no parking on lots)**
 5. Building addresses must be posted in a location that is conspicuous from the street on each lot at all times. Numbers must be a minimum of four inches (4") in height.
 6. Addresses must be posted on all temporary electrical poles.
 7. Because of serious safety considerations, citations will be issued to the job superintendent, electrician or an officer of the general contractor or electrical contractor if temporary power is tied directly into the permanent breaker box. Electricians are permitted to test house circuits provided that a licensed electrician is on site at all times while power is connected to the house.
 8. All re-inspection fees must be paid prior to the request of final inspections.
 9. An elevation approval letter shall be submitted with residential permit.
 10. An automatic fire sprinkler is required for residence 5000 sq. ft. and over including garages, porches, and patios. (See Attachment)

B. GENERAL INSPECTION NOTES

1. All inspections must be requested by calling (972) 203-4188. Inspections requested prior to 4:00 pm will be performed between 9:00am and 4:00pm next day. Inspections requested after 4:00 pm will be performed the second business day.
2. **Office hours** for inspectors are from 8:00 a.m. – 9:00 a.m. and 4:00 p.m. – 5:00 p.m. each day. **Technical questions must be directed toward the inspectors during the above listed office hours. Please do not call the permit techs and request technical information or ask to speak with an inspector.**
3. For general questions only and for permit information, you may call the office at (972) 203-4188.
4. **Re-inspection Fees.** A re-inspection fee will be assessed and no inspection performed when any of the following conditions apply:
 - a. The inspection requested is not ready when the inspector arrives.
 - b. The permit packet or the address of the site is not posted.
 - c. Town approved plans are not on site and available to the inspector.
 - d. The building is locked or the site is not accessible for inspection when the inspector arrives.
 - e. The work is red tagged for the same item(s) twice.
 - f. The original red tag has been removed from the site.
5. Re-inspection fees are **\$25.00** for the first failure and continually **\$25.00** for each subsequent failure. Re-inspection fees must be paid before final inspections can be performed.
6. Town approved building plans must be available, legible, and in order on the job site when all inspections are conducted. Failure to have plans on the job site will result in a re-inspection fee.
7. **Materials located in the right-of way.** All dirt, sand or any type of construction material must be located in such a way as to comply with the following requirements.
 - a. If no Town sidewalk has been constructed on the property, all construction materials must be located at least five feet (5') from the back of curb to allow for pedestrian passage through the property.
 - b. If a sidewalk does exist, construction materials must be placed behind the sidewalk.
 - c. At all times during construction, the water meter box must be installed around the water meter.
8. **Location of Permit Packets and Inspection Tags.** In order to allow for uniformity and the most efficient use of time, permit packets must be on the construction site at the location specified below. Inspection tags will be placed inside the permit packet by the inspector once the inspection is completed. The inspection tag must remain where left by the inspector until the inspection is approved. (**see attached**)
 - a. **T-Pole, Plumbing Rough & Foundation** – The permit packet must be located on the T-Pole.
 - b. **Top-Out Frame, Utility Final & Building Final** – The permit packet must be adjacent to the front door of the house.

9. **Engineering Letters and Other Required Documents.** Whenever an engineering letter or other document is required, the original letter must be placed inside the permit packet and visible from outside of the packet. This will allow the inspector to refer to the letter in order to verify compliance with the requirements of the engineer.
10. **Cancellations.** Inspections should not be requested until the contractor has verified that the work is complete and ready for inspection. Cancellations will only be accepted prior to 9am the day of inspection. Anything after 9am is subject to a re-fee.

C. RESIDENTIAL INSPECTIONS REQUIRED

Each of the following inspections must be requested in the listed order. If an inspection is requested before a prior required inspection has been approved, no inspection will be conducted.

Inspections required are:

Inspection

1. Temporary Pole (can be done at any time)
2. Piers (if installed) – The Engineer of record or a testing lab approved by the Building Official can verify that the piers comply with the approved drawings. Reports must be submitted prior to approval of the foundation inspection.
3. Flatwork (can be done at any time prior to Utility Meters)
4. Plumbing Rough with Form Board Survey
5. Foundation
6. Sheathing
7. Frame / Mechanical Rough / Electrical Rough / Plumbing Top-Out (must all be done at same time)
8. Utility meters (**third party insulation energy compliance results**)
9. Building Final / Mechanical Final / Electrical Final / Plumbing Final / Energy Final (must all be done at same time)

D. RESIDENTIAL INSPECTION REQUIREMENTS

1. TEMPORARY POWER POLE

- a. Double pole/single throw breaker installed for 240-volt plug.
- b. Single pole breaker installed for 120-volt plug with GFCI protection on all 120-volt receptacles.
- c. Box is to be secured to the pole.
- d. Pole is to be braced, secure and stable.
- e. A ground rod must be installed with a ground wire that is a minimum size of 6 AWG.
- f. The licensed electrician can test house circuits provided that power is disconnected when the electrician leaves the site.
- g. Legible address numbers must be posted on the T-pole. Numbers must be at least four inches (4") in height.
- h. No holes are allowed in the panel face.
- i. Plugs outside the panel box must be weatherproof.
- j. All breakers and receptacles must have legible amperage/voltage markings.

2. FLATWORK

Flatwork includes all driveways and approaches within the public right-of-way.

- a. The Town must inspect all sidewalks, driveways, and approaches within the public right-of-way. You must follow Town details for your project.
- b. All flatwork must be reinforced with steel. Town walks are required to have a minimum of three-eighths inch (3/8") rebar at twenty-four inches (24") on center transversely and eighteen inches (18") on center longitudinally with expansion joints at forty feet (40') on center.
- c. Approaches off of alleys must have a depth of six inches (6") and be reinforced with #3 bars eighteen inches (18") on center each way to the property line. Alley approaches must have a turn radius of six feet (6'). The alley must be doweled eighteen inches (18") on center with #3 bars that extend at least six inches (6") into the alley. Do not install an expansion joint at the alley. An expansion joint will be required at the property line.
- d. Approaches off of a street must have a depth of six inches (6") and be reinforced with #3 bars sixteen inches (16") on center to the property line. The street must be doweled eighteen inches (18") on center with #3 bars that extend at least six inches (6") into the street – or existing street steel may be used. An expansion joint will be required at the sidewalk. Do not install an expansion joint at the street.
- e. Decorative concrete may be installed only on private property. Any concrete work done within a street or alley easement must be completed with a brush finish.
- f. The minimum width for a driveway is ten feet (10').

3. **PLUMBING ROUGH**

No plumbing rough inspections will be made if it has been determined that it is too wet. All rained out inspections must be recalled. Plumbing rough inspections may be conducted in wet weather provided that a three (3) p.s.i. air test along with water (hydro-test) is placed on the sewer lines with a diaphragm gage at the discretion of the Building Official. When the inspection is requested, it must be stated that there is an air test on the sewer.

Plumbing rough inspections cannot be performed if the temperature is below freezing.

a. **Water Lines**

1. The form board survey must be present in the permit packet with the Town approved site plan when the inspection is requested.
2. One hose bibb with non-removable vacuum breaker must be installed in the water line to check the pressure on the water pipes.
3. All hose bibbs must have non-removable vacuum breakers installed at all times.
4. A one-inch (1") line supply will be required up to thirty-two (32) fixture units.
5. Copper lines will not be allowed to touch each other.
6. Copper lines must be sleeved or taped. Painting of the copper will not be accepted.
7. Lead solder and fluxes containing lead cannot be used to join potable water lines.
8. T & P (pop-off) lines for water heaters cannot be run in slab.
9. All lines under the slab must be type "M" copper or thicker. PEX piping may also be used underneath the slab.
10. All piping located under the slab must be continuous with no joints.
11. The water meter must be in place with all valves open to allow for testing of the lines at Town water pressure. If Town water is not available, a 50 p.s.i. air test can be substituted for the water test. A valid air test will not have any water in the lines.
12. Where a water service crosses a sewer ditch, the water line must be installed in a PVC sleeve.

b. Sanitary Sewer

1. The plumbing rough must be tested with a five-foot (5') head of water on all stacks in the house. The five-foot measurement will be taken from the top of the ninety (90) degree fitting at the last stack in the house. If the last stack is too high to see water in the pipe, the inspection is subject to receiving a disapproval tag.
2. The water test must include the sewer yard line. A test tee must be installed within 5 feet (5') of the sewer tap.
3. The main objective of a water test is to allow the inspector to look for wet spots along the plumbing piping. Overfilling the stacks to the point that the ground is wet around sewer piping will cause the inspection to fail.
4. Full size double clean outs must be installed along with a single clean out at property line.
5. All holes dug for sewer taps that are deeper than four feet (4'), must be protected by a temporary construction fence.
6. The Building Sewer must be 4" and connected to the Town's sanitary sewer system.
7. All sewer tap holes must be filled immediately after approval of the Plumbing Rough inspection. If the Foundation inspection is requested and performed prior to filling of the hole, the inspection will be classified as not ready.
8. All lines must rest on a two inch (2") bed of sand and all lines, traps and fittings must be completely exposed.

c. Gas Line

1. Gas systems with a working pressure of ½ psi or less must use a diaphragm gauge that contains a dial with a minimum diaphragm diameter of three and one half inches (3 ½"), a set hand, 1/10 pound incrimination and pressure range not to exceed 6 psi. The test pressure must be at least 3 psi.
2. Gas systems with a working pressure exceeding ½ psi must use a diaphragm gauge that contains a dial with a minimum diameter of three and one-half inches (3 ½"), a set hand, a minimum of 2/10 pound incrimination and a pressure range not to exceed 20 psi. The test pressure must be at least 10 psi.
3. All gas lines must be buried. The top of the line must be located at least eighteen inches (18") below grade.
4. Where poly gas lines are utilized, a number eighteen (18) AWG copper tracer wire must be buried alongside of the line for its complete length.
5. Black pipe gas lines installed in the ground must be factory mill wrapped pipe and all fittings must be properly field wrapped per manufacturer's installation instructions.

4. FOUNDATION

All foundation plans must be sealed by a structural engineer. No concrete inspections will be made if it has been determined that it is too wet. All rained out inspections must be recalled.

a. Post Tension

1. Everything must conform with the engineered plans with no addition or subtractions to the approved plans.
2. All cables must be straight.
3. All copper must be sleeved or taped. Painted copper will not be accepted.
4. Cable ends must be a minimum of six inches (6") below the top of the forms.
5. Cable ends must be a minimum of six inches (6") from the corners.

6. Cable insulation must cover the cable to within three inches (3") of the cable ends.
7. The post tension drawing must be on the job with the detail sheet and the plot plan (both must be Town stamped).
8. Cables that must be re-routed to miss plumbing fixtures must be done with long sweeping curves of the cable.
9. Electrical conduit located in the foundation must be installed.
10. Jenn-Air ducts must be installed (if being utilized).
11. All gas line sleeves must be installed.
12. Original finished floor elevation surveys, if required, and engineering letters verifying required piers were installed according to design must be submitted prior to requesting the inspection.
13. No changes can be made to the foundation after inspection approval without requesting another foundation inspection.
14. Poly must cover all pad areas only. Poly is to be cut or not installed in beams.
15. A water test with Town pressure must be maintained on the water supply lines.
16. All tub boxes must be installed.
17. Sewer lines must run at 90 degree angles to grade beams.
18. Water heater T & P lines cannot be composed of PVC material and cannot be installed in slab.
19. Sewer tap holes must be filled immediately after approval of the Plumbing Rough inspection. If the Foundation inspection is requested and performed prior to filling of the hole, the inspection will be classified as not ready and a reinspection fee will be assessed.
20. Form board survey must be located in the packet and visible from outside the packet.
21. If plastic water pipe is used, a concrete encased electrode must be installed. Concrete encased electrodes must extend at least 20 feet through the concrete. The preferred method is to use a #3 rebar that is at least 20 feet long (you can splice more than one piece of rebar together to get the 20 foot length as long as the bars are adequately tied together. Near the panel box, install the bar with an additional piece approx. 6 feet long tied to the 20' so that it extends through the location of the bottom plate and extend about 2 feet through the bottom plate. At the electrical rough, extend the ground wire from the main panel to the rebar and clamp the ground wire to the rebar.

b. Rebar

1. Work must conform to plans approved by structural engineer and Town.
2. Poly must cover all pad areas only. Poly is to be cut or not installed in beams.
3. Chairs must be in place.
4. Electrical conduit located in the foundation must be installed.
5. Jenn-Air ducts must be shown on approved foundation plans and installed according to the mechanical code.
6. All gas line sleeves must be installed.
7. Original finished floor elevation surveys and engineering letters verifying required piers were installed according to design must be submitted prior to requesting the inspection.
8. No changes can be made to the foundation after inspection approval without requesting another foundation inspection.
9. All tub boxes must be installed.
10. Sewer lines must run at ninety (90) degree angles to grade beams.
11. All copper must be sleeved or taped. Painting of the copper will not be accepted.
12. Water heater T & P lines cannot be composed of PVC material and cannot be installed in slab.

13. Sewer tap holes must be filled immediately after approval of the Plumbing Rough inspection. If the Foundation inspection is requested and performed prior to filling of the hole, the inspection will be classified as not ready and a reinspection fee will be assessed.
14. Form board survey must be located in the packet and visible from outside the packet.
15. If plastic water pipe is used, a concrete encased electrode must be installed. Concrete encased electrodes must extend at least 20 feet through the concrete. The preferred method is to use a #3 rebar that is at least 20 feet long (you can splice more than one piece of rebar together to get the 20 foot length as long as the bars are adequately tied together. Near the panel box, bend the bar to that it extends through the location of the bottom plate and extend about 2 feet through the bottom plate. At the electrical rough, extend the ground wire from the main panel to the rebar and clamp the ground wire to the rebar.

5. FRAME, MECH ROUGH, ELECTRIC ROUGH, PLBG TOP-OUT

a. Framing

1. Rafter and joist spans must comply with the 2018 International Residential Code
2. Exterior bottom plates must be secured to the foundation by L-bolts (washers and nuts must be tight). Anchor bolts at ever separation and every 6’.
3. Top plate splices must be offset a minimum of twenty-four inches (24”).
4. Rafters must be framed directly opposite each other at the ridge. The size of the ridge must be so that it is not less in depth than the cut end of the rafter.
5. Valleys and hip rafters must not be less than two inches (2”) nominal thickness and not less in depth than the cut end of the rafter.
6. Rafter, hip and valley splices must be spliced as follows. The spliced member must have a dove tail or an angle cut with a brace directly under the splice running to a load bearing wall. One side of the splice must remain open to allow the inspector to verify that the proper cut is made on the splice. The opposite side of the side left open must have a scab piece spray nailed to the spliced member that is the same size as the hip, rafter or valley. The scab piece must be long enough to extend at least two feet (2’) beyond both sides of the splice.
7. Where studs are spaced more than sixteen inches (16”) on center, rafters, joists and trusses must bear within 5 inches (5”) of the studs underneath.
8. All studs supporting second stories and roofs must be a minimum No. 3, standard or stud grade lumber. Utility grade studs may be used if all of the following apply: the studs are spaced more than sixteen inches (16”) on center, the studs do not support more than a roof and ceiling, and the studs do not exceed 8 feet in height for exterior walls and load-bearing walls or ten feet (10’) for interior non-load-bearing walls.
9. Studs must have full bearing on the bottom plate.
10. Purlins must be the same size as the rafter that it supports. Struts must be installed every four feet (4’) from the purlin to the wall or beam at no more than a forty-five degree (45°) angle. Struts longer than eight feet (8’) in length must be T-braced.
11. Joists over four feet (4’) in length must be pressure blocked on one side only with nails driven from the joist into the pressure block – or a joist hanger must be used.
12. Fur downs, chimneys, ceiling of different heights, and vertical wall spaces over ten feet (10’) must be fire blocked. Poly sealing small holes and gaps in fireblocks will be acceptable.
13. All lumber must be grade stamped. Unstamped lumber is unacceptable as a structural framing member.

14. Where ceiling joists support air handling units, skylights and water heaters, those joists will be calculated as floor joists. Where air handling units are supported by rafters, those rafters must be doubled.
15. There will be a two-inch (2") gap between fireplace material and wood studs of any other combustible material as required by the IRC.
16. **Stairways**
 - a. **Width.** Stairways must be at least thirty-six inches (36") wide. A handrail is required on at least one side of each continuous run of treads or flight with four or more risers.
 - b. **Handrails.** Handrails must be no less than thirty-four inches (34") and no more than thirty-eight inches (38") measured from the sloped plane adjoining the tread nosing, or the finish surface of the ramp slope of the stairs. Handrails for stairways must be continuous for the full length of the flight, from a point directly above the top riser of the flight to a point directly above the lowest riser of the flight. Handrail ends must be returned or terminate in newel posts or safety terminals. Handrails adjacent to a wall must have a space of not less than one and one-half inches (1½") between the wall and the handrail.
 - c. **Riser Height.** The maximum riser height of any stair is seven and three-quarter inches (7¾"). The measurement must be taken between the leading edges of the adjacent treads. The greatest riser height within any flight of stairs must not exceed the smallest by more than three-eighths inch (3/8").
 - d. **Tread Depth.** The minimum tread depth of any stair is 10 inches (10"). The tread depth is measured horizontally between the vertical planes of the foremost projection of the adjacent treads and at a right angle to the tread's leading edge. The greatest tread depth within any flight of stairs shall not exceed the smallest by more than three-eighths inch (3/8").
 - e. **Winders.** Winder treads must have a minimum tread depth of ten inches (10") measured at a point twelve inches (12") from the side of the stairs where the treads are narrower. Winder treads must have a minimum tread depth of six inches (6"). The greatest winder tread depth at the twelve inch (12") walk line must not exceed the smallest by more than 3/8 inch.
 - f. **Stairway Walking Surface.** The walking surface of treads and landings of stairways must not be sloped any steeper than one vertical unit in 48 inches horizontal (2 percent slop).
 - g. **Landings.** A floor or landing is required at the top and bottom of each stairway. (A floor or landing is not required at the top of an interior flight of stairs, provided a door does not swing over the stairs) A flight of stairs cannot exceed a vertical height of twelve feet (12') between floor levels or landings. The width of each landing must be no less than the width of the stairway. Every landing must have a minimum dimension of thirty-six inches (36") measured in the direction of travel.
19. Masonry fireplaces must be completed to a point one foot (1') above the damper.
20. Any brick on wood must comply with the ICC brick on wood policy.
21. Brick wall ties must be installed.
22. All penetrations in top plates must be sealed. Small penetrations may be poly sealed.
23. Holes in exterior sheathing must be sealed.
24. Covered porches and patios must be inspected to verify proper structural framing prior to installing fascia material.
25. Cutting, notching or boring of engineered beams is not allowed without a letter from a structural engineer.
26. If a pull down attic stair is used to access an attic appliance, the stair must have a minimum capATown rating of three-hundred (300) pounds.

b. Mechanical Rough

1. Metal ducts shall be screwed, joint mastic applied and inspected before insulation.
2. Flexible ducts shall be supported with material at least one and one-half inches (1½") wide. Maximum spacing for supports is four feet (4'). Some manufacturers require supports every two feet (2'). Turns must be made in such a way that the airflow is not deterred.
3. A minimum one-inch (1") clearance must be maintained around gas appliance vents. Air conditioning condensate drains must drain into a wet trap. Condensate lines that tie into a washer box must be tied in above the inlet of the washer box.
4. Where air-conditioning condensate drain plans are located in an attic, a secondary drain must be installed with the condensate line discharging over a window, door, patio or other approved location.
5. Condensate lines located in the attic must include a primary and secondary drain. Water level monitoring devices are not allowed in lieu of a secondary drain line.
6. Condensate drain lines must be a minimum of three-fourth inch (¾") in diameter.
7. Bath exhaust fan ducts must extend to the outside of the building. Where a fan is installed in a toilet room with a door, a second fan will be required in the room with the bathtub or shower.
8. Horizontal runs on gravity type water heater and furnace flue vents must not exceed seventy-five percent (75%) of the height of the vent.
9. Dryer vents are limited to a maximum length of twenty-five feet (25'). The twenty-five foot (25') length includes two (2) ninety degree (90°) fittings. Additional fittings over and above the two (2) allowed will reduce the maximum length of the vent by two feet (2') for every ninety-degree (90°) fitting (or combination of fittings that total 90°). Dryer vent connections must be taped and not screwed.
10. Dryer vents extending through a roof must include a tight fitting collar to keep line from falling back into the attic.
11. Attic access to a gas appliance (water heater or furnace) cannot be made from a sleeping area and must be within twenty feet (20') of all furnaces and water heaters.

c. Electrical Rough

1. Romex must be stapled every four and one-half feet (4 ½') on the horizontal.
2. Romex must be stapled within twelve inches (12") of all boxes.
3. Romex extending through masonry must be protected by conduit.
4. Sheathing on Romex must extend a minimum of one-fourth inch (¼") into the box.
5. Wire must be clamped to metal boxes.
6. Two (2) separate 20-amp circuits must be run for kitchen use. No fixed appliances other than a refrigerator may be put on these circuits.
8. A cold water ground may be used when water heaters are installed on the ground floor and copper water lines are used, the cold water ground must be attached at the cold water inlet to the water heater. When the water heater is not installed on the ground floor, the cold water ground must be attached to the cold water supply to the kitchen sink. A supplemental ground must also be supplied when using a cold water ground. If no metal water piping is available, a concrete encased electrode must be installed. Concrete encased electrodes must extend at least 20 feet through the concrete. The preferred method is to use a #3 rebar that is at least 20 feet long (you can splice more than one piece of rebar together to get the 20 foot length as long as the bars are adequately tied together. Near the panel box, bend the bar so that it extends through the location of the bottom plate and extend about 2 feet through the bottom plate. At the electrical rough, extend the ground wire from the main panel to the rebar and clamp the ground wire to the rebar.

9. A separate 20-amp laundry circuit must be supplied. No other outlets will be allowed off of this circuit.
10. All receptacles located outside the building, in a garage, in a bathroom, serving a kitchen countertop and receptacles within 6 feet of any other sink must be protected by a ground fault circuit interrupter.
11. All circuits that are not GFCI protected must be AFCI protected.
12. Laundry room, kitchen and bathroom receptacles must have AFCI and GFCI protection.
13. Where a panel or disconnect device is tapped more than one time, approved lugs shall be provided.
14. Armored cable (bx) shall not be used or installed in the Town as a wiring method unless it has a full size grounding conductor.
15. If service entrance conductors are more than three feet (3') in length, a disconnect must be provided at the outside of the structure and next to the electrical meter.
16. All 240-volt appliances must be wired with a four (4) wire system that includes a neutral and a separate ground.
17. A nail strap that is at least 1/16" thick must protect electrical lines in notched or bored studs that are 5/8" or less from the edge of the stud.
18. Electrical wiring installed through a bored hole must be protected by a steel plate at least 1/16" thick if the edge of the hole is less than 1/4" from the edge of the wood member.
19. All metal boxes must be bonded by a listed means (no wood screws).
20. Bathroom receptacles or switches must be at least three feet (3') from the edge of a bath tub.
21. CSST manifolds must be properly bonded per manufacturer's specifications.
22. Cables cannot be bunched together and run through a knockout or chase nipple into an electrical panel. Individual cable clamps or connectors are required to be used with only one cable per clamp or connector – unless the clamp or connector is identified for more than a single cable.
23. Circuits installed in or under a concrete foundation must meet the requirements of wet locations. This included kitchen island circuits.
24. Receptacles located in kitchen counter tops cannot be used to take the place of required wall receptacles.
25. The neutral conductor must be installed in switch boxes.
26. Circuits for smoke detectors must be roughed in. Smoke detectors must be located in each sleeping room and outside of each sleeping area in the immediate vicinity of the sleeping area. Additionally, at least one smoke detector is required on each story of a building. Smoke detectors must be interconnected so that if the alarm sounds on one detector, it triggers the alarm of all of the smoke detectors in the house.
27. Circuits for carbon monoxide detectors must be roughed in. Carbon monoxide detectors must be located outside of and in the immediate vicinity of each sleeping room.

d. Plumbing Top-Out

1. Water

- a. All copper lines must be braced.
- b. T & P lines must be composed of hard drawn copper or CPVC. T & P lines cannot be composed of PVC material and cannot be installed in slab.
- c. All T & P lines must have positive fall towards the outlet of the line. The end of the line must have a ninety (90) degree fitting attached that is pointing down

toward the ground. The outlet of the line must terminate between six inches (6") and twenty-four inches (24") from the top of the ground. Each water heater must have its own line. T & P lines from separate water heaters cannot be tied together.

- d. Frost proof hose bibbs with non-removable vacuum breakers must be installed.
- e. Lead solder and fluxes containing lead are prohibited materials for use in potable water pipes.
- f. Notching, cutting or boring must not seriously weaken structural member.
- g. All lines within one inch (1") of the edge of a stud or plate must be strapped with a 1/8 inch thick by 1-½ inch wide strap. The strap must be nailed to the stud of plate.
- h. All water lines in unheated areas must be insulated with a minimum of ¾" pipe insulation.
- i. All copper located in the brick ledge must be wrapped.

2. Sewer

- a. All fixtures must be stack vented and all vents must extend through the roof with flashing installed at the roof and at least 1 foot from any wall, at least 6 inches above the roof and at least 10 feet from any openable window.
- b. A top-out water test is required for all plumbing located above the first floor. Lines must be tested at least two feet (2') above the trap arm.
- c. No vents may be less than 45 degrees from the horizontal until they are at least six inches (6") above the flood rim of the fixture.
- d. Plumbing vents must terminate at least ten feet (10') from or two feet (2') above any window that can be opened.
- e. Water heaters must have a drip pan with a drain line to the outside of the building.
- f. All lines within one inch (1") of the edge of a stud or plate must be strapped with a 1/8 inch thick by 1-½ inch wide strap. The strap must be nailed to the stud or plate.
- g. Vents must terminate at least 10 feet from – or at least 3 feet above any openable window, opening or air intake.
- h. Support horizontal runs of PVC piping every four feet (4') on center.
- i. Shower pans must be set in concrete and secured to the wall. Voids under the shower pan must be eliminated.
- j. Condensate lines that tie into a washer box must be tied in above the inlet of the washer box.
- k. All drain lines must have a slope of at least one-quarter inch (¼") per foot.
- l. Air admittance valves are not allowed unless approved by the Building Official prior to installation.
- m. Island loop vents must utilize the following fittings in the order listed: a 45° fitting, a short-turn 90° fitting and a 45° fitting.

3. Gas Lines

- a. **CSST** Where a CSST gas piping system is utilized that contains a working pressure greater than ½ p.s.i., an air test of at least ten pounds per square inch (10 p.s.i) on a diaphragm gauge that has a set hand and has a maximum range of twenty (20) p.s.i. For portions of CSST piping that are regulated to a working pressure of less than ½ p.s.i, a 3 psi test with a diaphragm gage that has a set hand and has a maximum range of six (6) p.s.i. is acceptable.
- b. **Black Pipe** Where a standard black pipe system is utilized, an air test of at least three pounds per square inch (3 p.s.i.) is required. The test must be performed on a diaphragm gauge that has a set hand and has a maximum range of six (6) p.s.i.

- c. Holes cut for gas lines must only be large enough for the line to penetrate.
- d. Gas lines must be properly supported.
- e. Gas lines located between bricks and studs must be factory mill wrapped.
- f. All gas outlets must have approved gas stops installed along with caps.
- g. No water, soil, or waste pipe can be installed or located outside of a building, in an unheated area or in an exterior wall unless, adequate provisions are made to protect such lines from freezing.
- h. Gas vents must terminate at least 4 feet from any wall.
- i. CSST manifolds must be properly bonded per manufacturer's specifications.

6. **ENERGY INSULATION**

- a. All wall insulation must be installed per the RESCheck, IC3 calculator or Table R402.1.1 of the 2018 IECC.
- b. All windows and doors must meet the minimum requirements contained in the RESCheck, IC3 document or Table R402.1.1, whichever is applicable.

7. **UTILITY FINAL**

A. **Electric**

- 1. All wires must be terminated with a receptacle, switch, appliance or fixture -- or all wire ends must be wired nutted and placed in an electrical box with a blank cover installed. If appliances and fixtures are on site, all electrical connections to those appliances or fixtures must be complete.
- 2. Cover must be off of the main electrical panel.
- 3. All required grounds must be installed. If a cold water ground is utilized, you must also have a supplemental ground such as an eight foot (8') ground rod. Concrete encased electrodes must have an access cover exposing the connection of the ground wire to the rebar. All ground clamps and connections are to be tight.
- 4. Neutral and ground conductors must be properly coded and identified.
- 5. The meter base must be bonded to the main panel box. If metal conduit is installed between the meter and the main panel, the conduit will serve as the bond. If plastic conduit is used, a bond bushing will be required.
- 6. Feeder wires and branch wires must be protected by the proper sized breaker or fuse.
- 7. All receptacles and switches must be installed.
- 8. Bare bulb incandescent lights must not be installed in closet storage areas. Incandescent lights in closet areas must be located at least twelve inches (12") from any shelf. Fluorescent lights in closets must be installed at least six inches (6") from any shelf.
- 9. All light fixtures located within thirty-six inches (36") horizontally and less than eight feet (8') of the lip of a bathtub or shower must be waterproof.
- 10. CSST manifolds must be properly bonded per manufacturer's specifications.

b. **Gas**

- 1. Where a gas piping system is utilized that contains pressure greater than ½ p.s.i., an air test of at least ten pounds per square inch (10 p.s.i) on a diaphragm gauge that has a set hand and has a maximum range of twenty (20) p.s.i. For portions of gas piping that are regulated to less than ½ p.s.i, a 3 psi test with a diaphragm gage that has a set hand and had a maximum range of six (6) p.s.i. is acceptable.
- 4. Gas piping that will have a working pressure greater than ½ psi shall include a permanent metal tag at the meter, at the entrance into the house (if the gas meter is

located at the alley), and at the regulator stating the following: "Warning: ½ to 5 p.s.i. gas line".

5. Gas stops at each appliance must be properly secured for all types of piping including CSST systems.
6. All gas lines must be connected. Gas stops and caps must be installed on any gas line for future use.
7. Gas connectors must not exceed three feet (3') (except for clothes dryers and ranges, which must not exceed six feet (6')).
8. CSST manifolds must be properly bonded per manufacturer's specifications.

8. FINAL INSPECTIONS

a. Building

1. A solid walkway at least twenty-four inches (24") wide must be installed from attic openings to furnaces, water heaters and gas regulators. The distance from the opening to the equipment cannot be any further than twenty feet (20'). A thirty-inch (30") working platform is also required directly in front of the equipment.
2. Chimneys must extend at least two feet (2') above any point within ten feet (10') of the roof.
3. Street, alley, and all flatwork must be clean and clear of mud and debris.
4. Yard must be clear of debris and final grade completed.
5. A solid core door must be installed between the garage and living area.
6. A permanent address must be installed on the front and rear of the house (rear address is only required when driveway access is provided from the alley) with numbers of contrasting color to background.
7. Hard wired smoke detectors with a battery backup must be located in each sleeping room and outside of each sleeping area in the immediate vicinity of the sleeping area. Additionally, at least one smoke detector is required on each story of a building. Smoke detectors must be interconnected so that if the alarm sounds on one detector, it triggers the alarm of all of the smoke detectors in the house.
8. Hard wired carbon monoxide detectors with a battery backup must be located outside of and in the immediate vicinity of each sleeping room.
9. If a pull down attic stair is used to access an attic appliance, the stair must have a minimum capacity rating of three-hundred (300) pounds.

b. Mechanical

- 1) Each combustion air vent must be a minimum of one cubic inch for every 4,000 BTU of the appliance rating. (A 40,000 BTU water heater will require a ten (10) square inch vent in the bottom twelve (12) inches of the closet and a ten (10) square inch vent in the upper twelve (12) inches of the closet.
1. A mechanical heating system must be operational that is capable of maintaining a temperature of 68 degrees Fahrenheit (68°) at a point that is three feet (3') above floor level and two feet from exterior walls. The installation of one or more portable space heaters shall not be used to achieve compliance with this requirement.
2. Vent fans must be operational in bath and utility rooms. Where a water closet is separated from the shower area by a door, the fan is required to be installed in the shower area.
3. A solid walkway at least twenty-four inches (24") wide must be installed from attic openings to furnaces, water heaters and gas regulators. The distance from the opening to the equipment cannot be any further than twenty feet (20'). A thirty-inch (30") working platform is also required directly in front of the equipment.

4. Condensate lines located in the attic must include a primary and secondary drain.
Water level monitoring devices are not allowed in lieu of a secondary drain line.

c. Electrical

1. All receptacles must be wired properly. All light fixtures must be installed.
2. All GFCI's must be installed and working properly.
3. A permanent electrical outlet and light fixture controlled by a switch located at the required attic opening must be provided at or near air-conditioning and water heater equipment.
4. All areas requiring illumination must be switched with a wall type switch.
5. Circuits must be labeled in breaker box.
6. The Jacuzzi access panel must be removed for inspection.
7. Sprinkler wires located in garages must be strapped.
8. Electrical outlets located in garages that are not GFCI protected must be single receptacles and labeled.
9. Floor outlet receptacles must be accessible.
10. Jacuzzi access panels must be at least 12" X 12" with clear access to the motor (no pipes, wires, etc.). The opening must also be close enough to reach the motor in order to do maintenance on it and large enough to remove the motor for repair or replacement.
11. All HVAC equipment must have an electrical disconnect within site of the equipment served.
12. Water Heaters must have an electrical disconnect within site of the water heater.
13. All receptacles located outside the building, in a garage, in a bathroom, serving a kitchen countertop and receptacles within 6 feet of any other sink must be protected by a ground fault circuit interrupter.
14. All circuits that are not GFCI protected must be ARC fault protected.
15. Bathroom receptacles or switches must be at least three feet (3') from the edge of a bath tub.
16. Receptacles must be tamper resistant.
17. Receptacles located in kitchen counter tops cannot be used to take the place of required wall receptacles.

d. Plumbing

1. All gas lines must be connected. Gas stops and caps must be installed on any gas line installed for future use.
2. All plumbing fixtures must be installed. Any drain or water line that is installed for future use or expansion must have permanent caps.
3. Frost proof hose bibbs with integral vacuum breakers must be installed.
4. Sewer cleanouts must be cut so that the top of the cleanout is between one inch (1") and two inches (2") from the top of the ground.
5. Hot water must correspond to the left side of fittings on plumbing fixtures.
6. Dielectric unions must be installed within twelve inches (12") of regulation equipment, water heaters, conditioning tanks, or other similar equipment. Flexible water connectors with dielectric nipples can be used in place of unions.
7. PVC vent stacks must be painted with latex paint.
8. Air gap fittings must be installed on all dishwashers.
9. Shower doors must have a minimum opening clearance of twenty-two inches (22").
10. Gas connectors must not exceed 3 feet (except for clothes dryers and ranges which must not exceed 6 feet).

e. **Energy**

1. Ceiling insulation must comply with the minimum R-value contained in the RESCheck, the IC3 document or Table 402.1.1.
2. Depth markers must be installed in the attic for every 300 square feet of attic area.
3. If insulation is blown into the attic, a certificate must be installed at the attic entry point identifying the type and depth of the insulation used. The certificate must include a chart that indicates the depth the insulation must be to achieve a certain R value.
4. The SEER rating of the air conditioning system must meet the minimum SEER rating required by the RESCheck or the IC3 document.

f. **General**

1. Electrical and gas meters must be installed. If the inspection is requested and the inspection conducted prior to the installation of the electric or gas service meter, a reinspection fee will be assessed.
2. All work is to be complete. No workers should be on the site at the time of the inspection.

REQUIRED FINAL DOCUMENTS

**Precise Grade Certificate
Third Party Energy Final
Residential Energy Compliance
Backflow Certificate for Irrigation
Irrigation Verification Form**

**Finished floor Elevation (F.F.E.) Certificate
submitted to Floodplain Department prior
to final inspection if in floodplain**

This packet is only intended to be a helpful reference. Therefore, the above requirements are only a general list of building, electrical, plumbing, and mechanical code regulations. For a complete list of building requirements refer to:

**2018 International Residential Code
2017 National Electrical Code**

RESIDENTIAL FIRE SPRINKLER REQUIREMENTS

Fire sprinkler systems shall be required in all homes greater than or equal to Five Thousand (5000) square feet, measured including porches, attached breezeways, and garages.

All residential fire sprinkler systems shall be installed according to NFPA 13D or 13R as may the case may be and subject to the amendments set forth.

-All garages shall be sprinklered

-Unheated storage areas in attached garages with an area over thirty-two (32) square feet shall be protected.

-All bathrooms shall be protected.

-A water flow alarm shall be installed, such alarm shall be an integral part of the security system and monitored by an independent central office if a monitored security is installed.

-A fire department connection shall be installed on the front elevation 1 ½" in size.

-All sprinkler systems shall be hydrostatically tested according to NFPA 13 at 200psi.

-Backflow testing is required annually.

FREEZE PROTECTION

-Insulation shall be foil backed or approved paper back with an R-value of R-13 or higher and shall be stapled along the sides.

-There shall be a minimum of one foot insulation on each side in instances piping is ran above the joist cavity.

-All piping shall be covered, any gaps where insulation is not tight, additional insulation will be required.

-Temperatures in the home must be maintained at a level to prevent freezing.

Piping installed in unheated areas shall be protected by use of one of the following methods.

1. Antifreeze system
2. Dry pipe system
3. preaction system
4. Listed standard dry pendant, dry upright, or dry sidewall sprinklers extended from heated areas.

Antifreeze systems require a maximum concentration for glycerin for new systems of 48% by volume or a maximum concentrate of propylene glycol of 38% by volume.

Existing systems shall not have concentrations exceeding 50% glycerin or 40% propylene glycol.

Antifreeze systems shall be tested annually prior to the onset of freezing weather.

Plan Submittal and inspection requirements

- Two complete sets of plans that comply with the design and plan requirements of this standard.
- Two sets of hydraulic calculations.
- Two sets of manufacturers' material information sheets for the sprinkler heads, piping, and backflow preventers.
- All plans shall be signed and sealed.

All sprinklers systems shall be designed and installed by a registered and approved fire protection contractor.

Inspection shall be scheduled 24 hours prior to day of inspection

Stamped approved plan shall be on site for inspection

Insulation shall be in place for inspection.

Town of Sunnyvale
Residential Energy Compliance Certificate
Energy Code Requirements of the 2015 IRC (IECC)
Provide this form at building completion prior to final inspection

Project Address: _____

Permit Number: _____

DUCT LEAKAGE TESTING VERIFICATION

Rough-In Test Option (R403.3.3)

Post Construction Option (R403.3.3)

System #1 - _____ CFM25 System #2 - _____ CFM25 System #3 - _____ CFM25

System #4 - _____ CFM25 System #5 - _____ CFM25 System #6 - _____ CFM25

I certify that I have conducted a **duct leakage test and it has passed the requirements of the 2015 International Energy Conservation Code**. I further certify that I am certified to perform duct leakage testing certified by national or state organizations as approved by the building official. I certify I am an independent third-party entity, and have not installed the HVAC system; nor am I employed or have any financial interest in the company that constructs the structure.

Agency and Certification Number: _____

Signature of Responsible Party: _____

Printed Name and Title of Responsible Party: _____

BUILDING THERMAL ENVELOPE LEAKAGE TESTING VERIFICATION

Building Thermal Envelope Leakage Testing (R402.4.1.2): _____ ACH50

I certify that I have conducted an **air leakage test and it has passed the requirements of the 2015 International Energy Conservation Code**. I further certify that I am certified to perform air infiltration testing certified by national or state organizations as approved by the building official. I certify I am an independent third-party entity, nor am I employed or have any financial interest in the company that constructs the structure.

Agency and Certification Number: _____

Signature of Responsible Party: _____

Printed Name and Title of Responsible Party: _____

COMPLIANCE STATEMENT

We have concluded all inspections, testing and plan reviews of the above project and hereby declare it in compliance with the residential provisions of the 2015 IECC, as amended, for the selected compliance approach.

- Option 1(a) **Prescriptive:** Sections N1101.14 (R401) through N1104 (R404)
- Option 1(b) **Prescriptive: Recheck™ UA Approach Only:** Sections N1101.14 (R401)-N1104 (R404) (**attach report**)
- Option 2 **Performance:** Section N1105 (R405) Performance Approach (**attach report**)
- Option 3 **ENERGY STAR Certified Homes®** (**attach certificate**)
- Option 4 **Energy Rating Index Compliance Alternative (ERI):** Section N1106 (R406) **ERI:** _____
- Option #5 **ESL 4ACH⁵⁰ Tradeoff Code Equivalency Compliance**

Agency and Certification Number: _____

Agency Contact Information: _____

Signature of Responsible Party: _____

Printed Name and Title of Responsible Party: _____

Town of Sunnyvale
Residential Energy Compliance Path
Energy Code Requirements of the 2015 IRC (IECC)
Submit with application for a building permit

Project Address: _____

N1101.13 (R401.2) – Projects shall comply with one of the following:

- Option #1a – Prescriptive: Sections N1101.14 (R401) through N1104 (R404):**
N1102 (R402) Building Thermal Envelope. {Using table N1102.1.2 (R402.1.2) INSULATION AND FENESTRATION REQUIREMENTS BY COMPONENT} N1103 (R403) Systems.
N1104 (R404) Electrical Power and Lighting Systems (Mandatory).
Plus all mandatory provisions
- Option #1b – Prescriptive-Using REScheck™ UA approach Only: Sections N1101.14 (R401) through N1104 (R404):**
N1102 (R402) Building Thermal Envelope.
N1103 (R403) Systems.
N1104 (R404) Electrical Power and Lighting Systems (Mandatory).
Plus all mandatory provisions
- Option #2 – Section N1105 (R405) Performance Approach**
Plus all mandatory provisions
- Option #3 – ENERGY STAR Certified Homes®**
- Option #4 – Section N1106 (R406) Energy Rating Index Compliance Alternative**
Minimum envelope requirements \geq Table 402.1.2 or 402.1.3 – 2018 IECC
Plus all mandatory provisions
- Option #5 – ESL 4ACH⁵⁰ Tradeoff Code Equivalency Compliance^a**

Envelope Component	Option #1	Option #2
R402.4 Air Leakage	$\leq 4ACH^{50}$	$\leq 4ACH^{50}$
Wall Insulation Value	R13 + R3 ^b	R13 + R3 ^b
Fenestration U-factor/SHGC	$\leq 0.32/0.25$	$\leq 0.32/0.25$
Ceiling R-value	$\geq R49$	$\geq R49$
Duct Insulation	R8	R6
Radiant Barrier Required	No	Yes

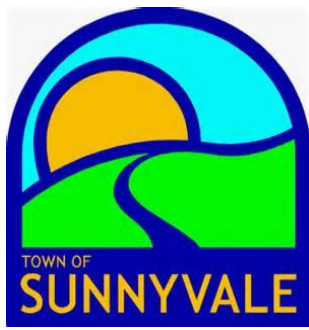
^a Except for the values listed in the table, all other mandatory code provisions are applicable.

^b First value is cavity insulation, second is continuous insulation or insulated siding.

NOTE: Attach appropriate compliance option “compliance report”

I certify that I have reviewed the construction documents including, but not necessarily limited to, insulation materials and R-values; fenestration U-factors and SHGC values; area-weighted average U-factor and SHGC calculations; mechanical system design criteria; mechanical and service water heating system and equipment types, sizes and efficiencies; equipment and system controls; duct sealing, duct and piping insulation and location; and air sealing details; and that the project as designed satisfies the minimum requirements for the compliance approach selected above.

Print Name: _____ **Sign Name:** _____ **Date:** _____



TOWN OF SUNNYVALE BUILDING INSPECTIONS

New Single Family Construction

Inspection Steps

STEP No.	INSPECTION TYPE	INSPECTION TYPE	PERMIT PACKET LOCATION
1	T-Pole	Erosion Control	T-POLE
2	Foundation Piers	Erosion Control	T-POLE
3	Plumbing Rough In Plumbing Sewer	Water Service Line Erosion Control FORM BOARD SURVEY REQUIRED	T-POLE
4	Foundation Slab	Erosion Control	T-POLE
5	Building Sheathing Brick Ties Building Shear Wall Framing	Electrical Rough Plumbing Stack Out Plumbing Gas Mechanical Duct	FRONT DOOR
6	Electric temp Service Energy Insulation Compliance Results	Gas Meter Release (3 rd Party Inspection)	PANEL BOX
7	Building Final Electrical Final Plumbing Final Energy Final Compliance Results	Mechanical Final Irrigation Final Backflow Preventer Fence Final	FRONT DOOR

ALL FINAL INSPECTIONS MUST BE REQUESTED AT THE SAME TIME

REQUIRED FINAL DOCUMENTS

Precise Grade Certificate
Third Party Final Energy
Residential Energy Compliance Certificate
Backflow Certificate for Irrigation

Finished Floor Elevation (F.F.E.) Certificate submitted to Floodplain Department prior to final inspection if in Floodplain
Irrigation Verification Form



IRRIGATION INSTALLATION VERIFICATION FORM

RE: _____
(Location address)

TO: **BUILDING OFFICIAL**

We, at _____, have installed and tested the irrigation system
(IRRIGATION CONTRACTOR/BUSINESS NAME)
per the requirements set forth by the Texas Commission on Environmental Quality (TCEQ rule # 2007-027-344 CE)

We also affirm that:

1. The approved backflow device has been installed and tested and a copy of that report is provided to the Town of Sunnyvale prior to receiving the building final inspection.
2. The system is provided with a rain and freeze sensor.
3. The owner and/or representative has been provided:
 - a. Final walk-through of operation of system and location of isolation valve
 - b. Maintenance Check list with:
 - i. manufacturer's manual
 - ii. seasonal watering schedule
 - iii. list of components
 - iv. compliance statement
 - c. Permanent sticker attached to controller with warranty and contact information
 - d. As-built plans of system

(OWNER OR REPRESENTATIVE)

(DATE)

(APPLICANT'S SIGNATURE)

(DATE)

(IRRIGATOR'S NAME)

(IRRIGATOR LICENSE #)

PLEASE LEAVE THIS FORM AND TEST RESULT IN THE BUILDER'S PERMIT PACKET AT THE CONSTRUCTION SITE. SEE BACK FOR INSPECTION CHECK LIST.

Sample Irrigation Inspection Check List*

1. All valve boxes shall be accessible for inspection and repairs.
2. A. Verify isolation valve installed prior to backflow device.
 - B. A “Y” strainer must be placed before the backflow device.
 - C. There must be 4 inches of gravel at the bottom of the valve box and 3 inches of clearance from gravel to the backflow device.
 - D. The backflow device must be accessible for testing.
3. Verify rain/freeze sensors are installed.
4. Spray heads shall be placed at least 4 inches from hard surfaces, (driveways, foundations, parking lots, etc.)
5. No spaces less than 48 inches wide may be irrigated with above ground spray heads.
6. The licensed Irrigator or the designated representative may be required to conduct an operational demonstration of the system in the presence of the Code Official.
7. System must not spray over impervious areas (pavement, walls, fences, decks, etc.)
8. Must provide copy of Irrigation Installation Verification Form.
9. Provide verification of backflow test.
10. Verify the (as-built) drawings/plans are on site.
11. A permanent sticker which contains the Irrigators company and warranty information shall be affixed to the controller.

* This list is only general in nature and is not all inclusive of all code requirements. It is only intended to help the applicant prepare for final inspection on the installation of irrigation system.