

**CLARK COUNTY
DEPARTMENT
OF
BUILDING**



**RESIDENTIAL BUILDING
INSPECTION CHECKLISTS**

July 12, 2005

GENERAL NOTES

- This checklist is intended for use as a GUIDE to assist and promote consistency in the application of all the codes and standard practices within Clark County. This list is for use of county inspectors and for the public in general.
- This checklist is intended for wood frame structures. The information in this checklist is not, nor was it ever intended to be, all-inclusive. It does not include all code or individual plan requirements. It is intended to reflect local policies, procedures and practices within Clark County. This checklist does not waive any specific code requirement not listed or allow for the decrease in the requirements of an engineered design. It also does not add requirements where the minimum of the code has been met.
- All approved plans, documents and revisions to plans must be maintained on site and available for review at all times the building is under construction.
- All plans and paperwork will be reviewed before performing any inspection.
- The owner, permit holder or responsible person on the job site is responsible for establishing safe access to perform all inspections.
- In the event that ladders are necessary to perform inspections, all ladders and equipment shall meet minimum OSHA standards. Inspectors are not responsible for setting up or moving ladders from one location to another, within or to other buildings or structures.
- Inspectors are not responsible for unscrewing/unbolting of items to verify information that is part of an inspection.

Note: This is not a complete list and is not inclusive of all construction methods, materials or practices. Check Lists are intended to serve as a reference point for a basic inspection only. Compliance with all the provisions of applicable codes shall be required.

RESIDENTIAL GENERAL

PAGE 1 of 1

FOUNDATION FOOTING (2222)

1. Pad cert submitted and approved
2. Pad level and **5 feet** outside of house footprint
3. Verify location of house, front and side setbacks per site plans
4. Verify any encroachments into **3 foot** setback of pop-outs or eaves
5. **3 feet** or less setbacks require plans check approval of system being used
6. Footings minimum of **12 inches** into undisturbed soil
7. Bottom of footings shall be clean and level
8. Check for zone of influence in relationship to retaining walls and property lines
9. Verify all footings for size, location and per details
10. Reinforcement in place per plan for location, size and grade
11. Steel in footings and special locations, with proper lap
12. Check shear plans to verify hold-down type and locations
13. Hold downs template in place
14. UFER in place and approved under the electrical permit

BASEMENT

1. A second pad cert required for construction over fill around basement
2. Verify footing size and location
3. Verify proper connection of footing to walls
4. Verify dampproofing/waterproofing requirements
5. Check requirement and location of drainage at foundation
6. Check backfill material per plan and protection of dampproofing/waterproofing

Note: This is not a complete list and is not inclusive of all construction methods, materials or practices. Check Lists are intended to serve as a reference point for a basic inspection only. Compliance with all the provisions of applicable codes shall be required.

RESIDENTIAL FOOTING (2222)

Page 1 of 1

CONCRETE SLAB ON GRADE (2229)

1. Verify slab thickness is per plan
2. Check all notes relating to the slab for construction detail requirements
3. Post tension cables are properly supported, straight and level, or per plan detail (1 in 10 maximum deviation from straight)
4. Jacketing not damaged or properly repaired
5. Items under slab in and approved (plumbing, mechanical, electrical inspections)
6. Forms level and supported
7. Verify requirement for vapor barrier, if required, installed and intact as per plan

Note: This is not a complete list and is not inclusive of all construction methods, materials or practices. Check Lists are intended to serve as a reference point for a basic inspection only. Compliance with all the provisions of applicable codes shall be required.

RESIDENTIAL CONCRETE SLAB ON GRADE (2229)

PAGE 1 of 1

SHEAR WALLS (2239)

1. Verify framing materials for proper wood species and grade of lumber
2. Anchor bolts with square washers on all exterior walls, shear walls and interior load bearing walls
3. Verify all shear wall types, nailing requirements and location of shear walls
4. Top plates properly lapped and nailed or strapped
5. Hold downs complete and on proper size framing member (not on trimmers)
6. All structural framing details are complete and per plan
7. Verify sizes and location of all headers, king studs, trimmer studs
8. Verify beam sizes, with load transfer to foundation
9. All transfers/drag, straps and miscellaneous hardware in place
10. Epoxy repair reports complete and ready for turn-in (inspector to pick up report and return to office)
11. Verify continuous shear diaphragm from foundation to roof sheathing, unless shown different on approved plans
12. Verify all points of bearing are continuous to the foundation

Note: This is not a complete list and is not inclusive of all construction methods, materials or practices. Check Lists are intended to serve as a reference point for a basic inspection only. Compliance with all the provisions of applicable codes shall be required.

RESIDENTIAL SHEAR WALL (2239)

PAGE 1 of 1

FLOOR/ROOF SHEATHING (2235/2236)

1. County approved truss calculations on site
2. Follow truss layout plan and verify truss calculations for each truss
3. Verify blocking locations and completeness of blocking
4. Drag strapping and blocking, locations and connections
5. Verify gable end bracing requirements and spacing
6. Attachment of trusses to top plate
7. Look for broken, damaged, or modified trusses
8. Provide approved engineer fixes for damaged trusses
9. Over-build areas verify member size, grade, and bracing requirements
10. Ventilation openings through overbuild areas
11. Verify sheathing material type, thickness, span rating and grade
12. Spacing of sheathing
13. Weather exposure rating for exposed underside (eves)edge material (starter board)
14. Edge and field nailing of sheathing
15. Spacing and size of nails or staples
16. Over and/or under driven nailing
17. Shear transfer nailing locations and requirements
18. Chimney anchoring and crickets

Note: This is not a complete list and is not inclusive of all construction methods, materials or practices. Check Lists are intended to serve as a reference point for a basic inspection only. Compliance with all the provisions of applicable codes shall be required.

RESIDENTIAL FLOOR/ROOF SHEATHING (2235/2236)

PAGE 1 of 1

ROOF UNDERLAYMENT (2268)

1. Flashings in place for valleys and roof penetrations
2. Wall flashings and transitions per details
3. Proper roof underlayment material
4. Underlayment seams lapped **2 inches** on sides, **6 inches** on ends and secured to roof
5. Battens installed, if required

Note: This is not a complete list and is not inclusive of all construction methods, materials or practices. Check Lists are intended to serve as a reference point for a basic inspection only. Compliance with all the provisions of applicable codes shall be required.

RESIDENTIAL ROOF UNDERLAYMENT (2268)

PAGE 1 of 1

FRAMING (2244)

1. Finish floor certification must be submitted and approved before inspection can be made
2. Check for any QAA requirements for steel, welding, etc., verify field report
3. Completeness of fireblocking, **10 foot** vertical and horizontal
4. Fire stop top plate penetrations with Class I flame spread material
5. Fire block wall penetrations every **10 feet** horizontally
6. Check for floor truss draftstopping areas exceeding **1000 sq. ft.**
7. Maximum bored holes **40%** bearing and exterior walls, **60%** others
8. Maximum notches **25%** bearing and exterior walls, **40%** others
9. Trade damage to studs, shear walls, trusses and structural members
10. Verify stair rise and run
11. Check landing widths and length
12. Verify stairway head room clearance minimum **6 feet 8 inches**
13. Attic access opening, location and minimum **22 inches x 30 inches**
14. Attic ventilation **1/150** plus combustion air requirement (see Mechanical)
15. Escape/rescue window size and sill height maximum **44 inches**
16. Fireplace clearance to framing
17. Fireplace hearth extensions
18. Fireplace opening to combustibles
19. Roof top flashing in place

Note: This is not a complete list and is not inclusive of all construction methods, materials or practices. Check Lists are intended to serve as a reference point for a basic inspection only. Compliance with all the provisions of applicable codes shall be required.

RESIDENTIAL FRAMING (2244)

PAGE 1 of 1

EXTERIOR LATH (2249)

One Coat

1. Review for compliance to ES report for foam and stucco system being used
2. Verify installers card
3. Weep screed location and tight to framing with clearance to earth or concrete
4. Foam tongue and groove joints tight, vertical joints touching
5. Lath tight and lapped properly
6. Lath shall have **2 inches** horizontal and **6 inches** vertical end laps
7. **6 inch** on center nailing of lath field and perimeter
8. Verify nail/staple length in relation to foam thickness
9. Caulking of penetrations
10. Verify doors and window openings flashed and weather tight
11. Check if foam is cut back at **45° angle** from windows and doors
12. Outside edge corners shall have the foam held back from edge or lath doubled
13. Electrical panel flashed and weather tight
14. Verify proper attachment of pop-outs
15. Minimum **2 inch** transitions lap through corners from lath to high rib ceilings
16. Verify thermal barrier material for separation from foam materials and heat producing appliances in an attic
17. Foam separated from behind fireplace/gas appliances (drywall **1 foot** above fire box, or no foam on the exterior wall)
18. Verify thermal barrier material for separation from foam materials behind fireplace/gas appliances
19. Verify double layer weather barrier paper over wood sheathing

Three Coat Stucco

1. Weep screed location and tight to framing with clearance to earth or concrete
2. Lath tight and lapped properly
3. Lath shall have **2 inches** horizontal and **6 inches** vertical laps
4. Verify doors and window openings are flashed and weather tight
5. **6 inch** on center nailing of lath field and perimeter (for shear, see plans)
6. Electrical panel flashed and weather tight
7. Minimum **2 inch** transitions lap through corners from lath to high rib ceilings
8. Verify double layer weather barrier paper over wood sheathing

Note: This is not a complete list and is not inclusive of all construction methods, materials or practices. Check Lists are intended to serve as a reference point for a basic inspection only. Compliance with all the provisions of applicable codes shall be required.

RESIDENTIAL EXTERIOR LATH (2249)

Page 1 of 1

INSULATION (2252)

Walls

1. Verify compliance to energy calculations (wall, ceiling and knee wall insulation requirements)
2. Check glazed openings for U-value (different for each type of glazing)
3. Verify sealing around window and door frames
4. Verify insulation in concealed locations (double shear, behind tubs/showers, behind fireplaces, floor joists)
5. Verify baffles provided for eve vents with blown attic insulation

Attic

1. Check blown attic insulation is to proper depth
2. Blown insulation is uniform in thickness
3. Verify clearance to lights and B-vents per their listing
4. Verify installer cert on site

Note: This is not a complete list and is not inclusive of all construction methods, materials or practices. Check Lists are intended to serve as a reference point for a basic inspection only. Compliance with all the provisions of applicable codes shall be required.

RESIDENTIAL INSUALTION (2252)

PAGE 1 of 1

DRYWALL (2259)

1. Check shear plans for drywall shear locations
2. Verify shear locations and nail schedule
3. General drywall application, field and edge nailing
4. Verify electrical boxes are within **1/4 inch** of the face of the wall and there is not gaps greater than **1/8 inch** around the boxes
5. Check for router damage to electrical wires in boxes
6. In wet location, verify material being installed per its' manufactures instructions or code requirements
7. **5/8 type X** in garages, under stairs or where required per plan

Note: This is not a complete list and is not inclusive of all construction methods, materials or practices. Check Lists are intended to serve as a reference point for a basic inspection only. Compliance with all the provisions of applicable codes shall be required.

RESIDENTIAL INTERIOR LATH/DRYWALL (2259)

PAGE 1 of 1

BUILDING FINAL (2299)

1. Verify all clearances approved and sub trade finals approved before inspection is made
2. Verify site drainage in place
3. Address is proper size, posted, illuminated
4. Finish site grading done, **6 inch** clearance from earth to wood items
5. Special landscape requirements in place (site plan)
6. Roofing complete and cleaned off
7. Attic tile vents in place (right number)
8. Self closing door **1 3/8 inch** thick
9. **26 gauge** duct penetrations with no openings into garage
10. Smoke detectors working and tied together with battery backup
11. Smoke detectors are in all the locations required
12. Stairway handrails size, (min **1 1/4 inch** max **2 5/8 inch**) with returns
13. Stairway handrails mounting height **34-38 inches** to top of rail
14. Guardrails pattern (< **four (4) inch** sphere)
15. Guardrail height min **36 inches**
16. Door landings in place, size and slope
17. Safety glazing locations verified

Note: This is not a complete list and is not inclusive of all construction methods, materials or practices. Check Lists are intended to serve as a reference point for a basic inspection only. Compliance with all the provisions of applicable codes shall be required.

RESIDENTIAL BUILDING FINAL (2299)

PAGE 1 of 1

BLOCK WALLS

FOOTINGS (2222)

1. Verify type of wall (county plan or engineered)
2. Verify location of walls from site plan
3. Private property line walls need notarized approval of both land owners
4. Footings minimum **12 inches** deep, **9 inches** thick
5. Width per plan
6. If retaining wall, size per plan
7. Steel in place with **3 inch** clearance to earth
8. Minimum **20 inch** lap on all steel

PREGROUT (2226)

1. Verify height of wall **6 foot** maximum without Variance
2. Total wall height, retainer and block wall **15 feet** high
3. Vertical steel in cells
4. Intermediate and top bond beam in place **OR** alternate Durawall every other course in bed joint
5. Vertical steel into top block
6. Pilasters/expansion joint locations per plan
7. If retaining wall, damp proofing in place
8. If retaining wall, drainage holes in wall every **8 feet** or per plan

FINAL (2299)

1. Wall grouted
2. If required, cap in place
3. No steel protruding from top of wall
4. Drainage around wall completed
5. Maximum **24 inches** backfill next to standard wall

Note: This is not a complete list and is not inclusive of all construction methods, materials or practices. Check Lists are intended to serve as a reference point for a basic inspection only. Compliance with all the provisions of applicable codes shall be required.

BLOCK WALLS

PAGE 1 of 1

GROUNDING ELECTRODE (3319)

1. All grounding electrodes in new construction are to be a concrete encased electrode (UFER) per the Southern Nevada Electric Code Amendments
2. Electrode is of the proper size, length and location in the bottom of the footing (min **20 feet** #4 rebar in bottom **2 inches** of footing)
3. Existing structures may have a grounding electrode of any type prescribed in NEC as limited by the Southern Nevada Electrical Code Amendments

Note: This is not a complete list and is not inclusive of all construction methods, materials or practices. Check Lists are intended to serve as a reference point for a basic inspection only. Compliance with all the provisions of applicable codes shall be required.

RESIDENTIAL GROUNDING ELECTRODE (3319)

PAGE 1 of 1

UNDERGROUND ELECTRICAL (3311)

1. The wiring method and all associated fittings used are correct for an underground application
2. Burial depth is the depth required by the NEC
3. Direct burial cables such as USE or UF are provided with S loops at each end and protected by conduit to the required burial depth or **18 inches** below grade
4. Metallic elbows and fittings that do not have earth coverage of **18 inches** are to extend in metallic raceways back to a panel board, box or other enclosure due to grounding requirements. (Appropriate corrosion protection shall be required on metallic raceway when installed below grade)
5. Rigid non-metallic conduit that is subject to physical damage shall be Schedule 80 RNMC
6. Warning tape at **12 inches** above the Service laterals conductor is provided and tape is verified prior to approval of underground electrical

Note: This is not a complete list and is not inclusive of all construction methods, materials or practices. Check Lists are intended to serve as a reference point for a basic inspection only. Compliance with all the provisions of applicable codes shall be required.

RESIDENTIAL UNDERGROUND ELECTRICAL (3311)

PAGE 1 of 1

RESIDENTIAL SLAB ELECTRICAL (3321)

1. No direct buried cables below slab
2. Conduits are supported and installed as prescribed in the International Building Code
3. Any conductor used under the slab required to be in conduit and wet location conductors (i.e. THW, THWN, THHW, UF, etc.)
4. Conduit runs are continuous and not reduced in mid-run
5. Metallic elbows and fittings that do not have earth coverage of **18 inches** are to extend in metallic raceways back to a panel board, box or other enclosure due to grounding requirements
6. Rigid non-metallic conduit that is subject to physical damage shall be Schedule 80 RNMC

Note: This is not a complete list and is not inclusive of all construction methods, materials or practices. Check Lists are intended to serve as a reference point for a basic inspection only. Compliance with all the provisions of applicable codes shall be required.

RESIDENTIAL SLAB ELECTRICAL (3321)

PAGE 1 of 1

ROUGH ELECTRICAL (3331)

Panelboards (All Panels)

1. Read and review the listing information on the panel label
2. The panelboard is the correct type for the location such as “Wet Location”, etc. and installed per its’ listing
3. The panelboard is listed and installed per the terms of its’ listing and any installation instructions provided by the manufacturer
4. Used electrical equipment shall not be used without the prior approval of the Building Official
5. Oxide inhibitor is required on all aluminum conductors at their terminations
6. Grounding Electrode Conductor, when required, is sized per Table 250.66
7. Grounding Electrode Conductor, when required, is terminated in an approved method and on the correct buss
8. Only one grounded conductor (neutral) is permitted under a single screw on any buss unless it is listed for multiple conductors
9. No panels are to be installed in bathrooms or clothes closets (Special conditions may permit a clothes closet installation)
10. Number of cables terminated in cable connectors per listing of the cable connector
11. All wiring methods terminating in the panel are terminated, secured and supported as required for that wiring method
12. No circuit breakers are higher than **6 feet, 7 inches** above the floor or grade level
13. The inside of the panel is not damaged or contaminated by foreign materials such as paint, plaster, cleaners, abrasives or corrosive residues
14. All unused openings are closed using knock out seals of the appropriate thickness and type
15. Any back fed breaker that the conductors are not factory installed on, must be held to the buss with a positive means such as clips, screws or bolts.

Note: This is not a complete list and is not inclusive of all construction methods, materials or practices. Check Lists are intended to serve as a reference point for a basic inspection only. Compliance with all the provisions of applicable codes shall be required.

RESIDENTIAL ROUGH ELECTRICAL (3331)

PAGE 1 of 5

Service Equipment

1. Service correct size and a main disconnect located on the exterior of the building
2. The equipment is listed and identified as “Service Equipment” or “May be Used as Service Equipment”
3. Center height of the meter is no less than **4 feet, 6 inches** and not more than **6 feet, 7 inches** above the floor or finish grade level
4. Service entrance raceway is rigid metallic or intermediate metal conduit
5. Service riser is bonded to the service enclosure, if it does not terminate at a factory or Myers type hub
6. Service is connected to the grounding electrode with the conductor sized per Table 250.66 and is terminated in an approved manner
7. Bond water piping and building steel to the service equipment. Conductor is sized per Table 250.66
8. Grounding electrode conductor and main bonding jumper is not terminated in the utility side of the enclosure (line side)
9. Phone and CATV grounds are not terminated on the inside of the service equipment enclosure

Sub Panels at Detached Structures

1. Subpanels in a detached building may be a three or a four-wire feeder, provided the conductors are not run through the building (outside of the building)
2. A disconnecting means is not required to be located on the exterior of the building, if the building is an accessory to a single-family dwelling
3. If the sub panel is fed with a four-wire feeder or a metallic piping system connects the two buildings, the grounded conductor (neutral) must be isolated
4. If the sub panel is fed with a three-wire feeder and there is no metallic piping that connects the two buildings, the grounded conductor (neutral) bonds to the equipment enclosure
5. Metallic water piping is required to be bonded to the sub panel
6. More than one branch circuit requires a grounding electrode to be connected to the grounding buss in the sub panel. The grounding electrode conductor sized per Table 250.66
7. A main breaker is required if the panel contains more than 6 breakers

Note: This is not a complete list and is not inclusive of all construction methods, materials or practices. Check Lists are intended to serve as a reference point for a basic inspection only. Compliance with all the provisions of applicable codes shall be required.

RESIDENTIAL ROUGH ELECTRICAL (3331)

PAGE 2 of 5

Feeders

1. Feeders are sized per Table 310.15 (B)(6)
2. Feeder contains an equipment grounding conductor, where required
3. Conductors run under slab or underground are wet location conductors
4. Conductors are identified with the correct color for their use
5. SE or SER Cables installed inside of the building are to be installed as required in Article 334 for non-metallic cable
6. Feeders installed in raceways shall have that raceway installed per the appropriate section of the code for that raceway

Required Outlets

1. Every hallway 10 feet long or longer shall contain at least one 120 volt receptacle outlet and a switch controlled light
2. Every stairway with six or more steps shall have a luminaries to illuminate the stairway with a three way switch located at top and bottom of the stairs to control the luminary
3. The 120 volt receptacle outlets are placed throughout on every wall space that is a minimum **2 foot** wide. These outlets shall meet the **6 feet** and **12 feet** rule
Note: Fixed glazing and railings are considered wall space
4. Lighting outlets are provided in all rooms and switched where required to be switched
5. Switch controlled lights are installed at all doors that have grade level access with the exception of roll up garage doors
6. Switches are not behind any door with the door in the fully open position
7. Light, switch and 120 volt service receptacle is provided for attic or under floor equipment requiring servicing with the switch located at the usual point of entrance into the space (if under floor GFCI protection is required)
8. Appliances not permitted to be cord and plug connected shall be hard wired and provided with a disconnecting means
9. Bathrooms require at least one 120 volt outlet within **36 inches** of the lavatory and all receptacles in a bathroom are to be GFCI protected
10. One GFCI protected outlet shall be required in the following locations; garage, on the exterior front and rear of the dwelling. These receptacles are to be within **6 feet, 6 inches** of grade or floor level
11. Kitchen countertops, **12 inches** wide or wider, require an outlet with outlets spaced at **4 feet** on center. No point on the counter top is to be more than **24 inches** from an outlet
12. Peninsula and island countertops that serve a kitchen are to have one receptacle for each four foot of countertop measured in the long dimension

Note: This is not a complete list and is not inclusive of all construction methods, materials or practices. Check Lists are intended to serve as a reference point for a basic inspection only. Compliance with all the provisions of applicable codes shall be required.

RESIDENTIAL ROUGH ELECTRICAL (3331)

PAGE 3 of 5

Branch Circuits

1. Kitchen shall have a minimum of two 20 amp small appliance branch circuits to serve the kitchen countertops. All countertop receptacles shall be GFCI protected
2. Kitchen countertop outlets are equally divided with no more than four duplex outlets per circuit. Outlets for gas ranges and electric clocks may be on a dedicated circuit and is not counted in the load limitation of four outlets per circuit.
3. Microwave oven, range hood, dishwashers and similar equipment in the kitchen that require an individual dedicated 20 Amp branch circuit per the Southern Nevada Electrical Code Amendments.
4. Outlets in the dining room, nook and/or pantry are on a 20 Amp small appliance branch circuit
5. The Laundry is provided with an individual 20 Amp branch circuit. This circuit must serve the clothes washer and may serve one additional outlet in the laundry area, such as the 120 volt outlet for a gas dryer
6. Bathroom 120 volt receptacle outlets shall be a 20 Amp branch circuit with only bathroom receptacle outlets on that branch circuit unless the circuit serves a single bathroom. All bathroom 120 volt receptacles shall be GFCI protected
7. Forced Air Unit (FAU) is provided with an individual branch circuit with no other outlets except for the unit and equipment associated with the unit such as condensate pumps, air cleaners or humidifiers
8. Branch circuits used exclusively for lighting may be a 15 Amp branch circuit
9. Branch circuits used for general use outlets or both general use outlets and lighting shall be a 20 Amp branch circuit
10. Branch circuits for dedicated appliances such as air conditioning equipment or water heaters, shall be sized as required for the specific appliance
11. Bedroom outlets are required to be protected with Arc-Fault Circuit Interrupters (AFCI) and shall not be wired with multi-wired branch circuits unless there is a listed two pole AFCI available from the equipment manufacture

Note: This is not a complete list and is not inclusive of all construction methods, materials or practices. Check Lists are intended to serve as a reference point for a basic inspection only. Compliance with all the provisions of applicable codes shall be required.

RESIDENTIAL ROUGH ELECTRICAL (3331)

PAGE 4 of 5

Nonmetallic Sheathed Cable (NM Cable) (Romex)

1. Cables installed **1-1/4 inch** from face of studs or otherwise protected from damage
2. Cables supported within **8 inches** of plastic SG boxes without clamps or **12 inches** for boxes with clamps. Then every **4 and 1/2 feet** thereafter where run parallel to framing and every 6 feet where run perpendicular to trusses spaced **2 feet** on center
3. Re-identify white wires permitted to be used as hot conductors
4. Verify all receptacles are wired with #12 conductor (Southern Nevada Electrical Code Amendments)
5. Cable is not in contact with truss gang plates or other abrasive construction elements that may damage the cable
6. No unprotected Cables located within **6 feet** of attic access opening
7. All neutrals in multi-wire branch circuit are pigtailed together
8. Cables must be stapled flat and not their edge
9. Four wire circuits must be used on all new 240 volt ovens and dryers

Boxes

1. Boxes must be rigidly secured to the structure
2. **3 inches** of wire out of boxes before any joints, including ground
3. All boxes in walls and ceilings shall be within **1/4 inch** of finished surface in non-combustible walls and flush if combustible surface. Use of box extensions (goof rings) are acceptable and must be verified at final
4. Tie all ground wires in each box together. No tek or sheet metal screws are permitted to be used on grounding electrode conductor connections
5. Metallic boxes must be properly grounded
6. Snap switches, including dimmers, shall be grounded unless installed in a metal box and self-grounding devices are used and properly installed. Grounding pigtailed must be present at time of rough
7. Plastic boxes that use connectors have only non-metallic connectors installed
8. Non-metallic boxes with plaster rings (mud rings or box extensions) are to be the non-metallic type
9. Plastic boxes are to have no metallic fasteners on the inside of the box unless the box is listed for such use
10. No box is to be field modified
11. Boxes in fire rated walls are steel or are of the appropriate fire rating of the firewall and meet any opening size limitation or offset requirement set by the other codes

Smoke Detectors

Smoke detectors are interconnected with a single cable containing four conductors (12-3 WG or 14-3 WG)

FINAL ELECTRICAL (3399)

Panelboards

1. Panel cover opens and closes with a full 90⁰ degree door swing
2. Two spare full size breaker spaces (Southern Nevada Amendment)
3. Check label and only use breakers approved by the manufacturer for that panelboard. Check multi-wire branch circuits and 240 volt loads to verify correct phase configuration. Some panel manufacturers only allow mini-breakers in certain locations.
4. No paint or overspray on panel buss bars and connections
5. Working clearance in front of all panels
6. Splices are allowed in panels
7. All breakers in the panel are to be legibly marked and labeled to clearly indicate the area and loads served
8. Oxide inhibitor on all aluminum conductors
9. All circuits phased correctly. Use caution on phases of branch circuits connected to multi-wire branch circuits
10. All breakers are clearly labeled to indicate the loads served
11. Any multi-wire branch circuit that terminates on a single yoke of a device is to be handle tied together using a listed handle tie
12. Check all breakers for correct wire size and corresponding breaker size
13. Bedroom branch circuits are protected with arc-fault breakers

Receptacles

1. In the garage, all receptacles shall be GFCI protected, except circulation pump, sprinkler clock or similar dedicated equipment occupying fixed spaces and receptacles over **6 feet, 6 inches** above the floor
2. A 20 amp receptacle is required on any individual branch circuit with a single outlet
3. All outside receptacles are to be GFCI protected, including overhead, and any receptacle outlet on the roof or within **25 feet** of A/C
4. All 15 and 20 amp receptacles in wet locations require bubble type covers
5. All receptacles serving kitchen counter tops and any bathroom receptacles shall be GFCI protected
6. In the unfinished basements, all receptacles shall be GFCI protected, except circulation pump, sprinkler clock or similar dedicated equipment occupying fixed spaces and receptacles over **6 feet, 6 inches** above the floor

Note: This is not a complete list and is not inclusive of all construction methods, materials or practices. Check Lists are intended to serve as a reference point for a basic inspection only. Compliance with all the provisions of applicable codes shall be required.

RESIDENTIAL FINAL ELECTRICAL (3399)

PAGE 1 of 2

Light Fixtures

1. Required lighting fixtures are installed in all locations that require fixtures, bedrooms, living rooms, and dens may have switched receptacles. Rooms with ceiling fans may have those outlets blanked off, provided there are switched lighting outlets in the room
2. Closet light clearances **6 inches** for recessed and fluorescent, **12 inches** for surface incandescent with no open or exposed lamps
3. Fluorescent and bar lights mounted over outlet boxes are required to have access to box (large KO). Chain hung fixtures have a #18 grounding conductor to the fixture and there is no tension on the conductors
4. All lighting fixtures in wet locations are sealed or installed with a gasket at the walls, with a drip hole provided at the bottom of the seal
5. Check fixtures that are installed in the tub zone **3 feet** horizontal and **8 feet** vertical and verify GFCI protection for all fixtures permitted to be in the tub zone
6. All lighting luminaries are to be listed

Arc-Fault Protection

1. All bedroom receptacles and lights are to be protected by Arc-Fault Circuit Interrupters including wet bar receptacles. In bedrooms, any receptacle within **6 feet** of a sink is also required to be GFCI protected in addition to the requirement for AFCI protection
2. Cord and plug connected room A/C units in any room require arc-fault or LCDI installed in factory cord

Appliances

1. The appliance is listed and installed to the terms of its' listing
2. Manufacturers' installation instructions are on site and the appliance is installed in compliance with those instructions
3. Disconnecting means shall be in site of the appliance and within **50 feet**
4. All disconnecting means are to be accessible
5. If cord connections are permitted, check cord length to verify that length limitations are not exceeded
6. Only appliances listed to be cord and plug connected may be cord and plug connected. All others must be hard wired and be provided with an approved disconnecting means
7. Circuit breakers that are not within sight of, or **50 feet**, of an appliance used as a disconnect under the lockout section have to be capable of being locked individually

Note: This is not a complete list and is not inclusive of all construction methods, materials or practices. Check Lists are intended to serve as a reference point for a basic inspection only. Compliance with all the provisions of applicable codes shall be required.

RESIDENTIAL FINAL ELECTRICAL (3399)

PAGE 2 of 2

TEMPORARY POWER POLE (3380)

1. Temporary power permits are to include all sub-panels connected to the service to be included on the scope of work of the permit or a separate permit is to be issued for the distribution system
2. Generators supplying temporary power systems shall require a permit and are to be grounded as prescribed in Article 250
3. Grounding rod required for each pole
4. All equipment shall be listed and free from damage
5. Temporary power systems may not use used equipment without the prior approval of the Building Official
6. Distribution conductors on the load side of the service are to traverse only the property under the control of the developer that holds ownership of the property where the temporary power pole is located
7. Service drops and all overhead conductors are to meet the height requirements of Section 230.24 (B) for services and Section 225.18 for overhead conductors on the load side of the service
8. Service equipment, raceways, fittings and all boxes are rain tight
9. All loads shall be connected
10. All 120 and 240 volt receptacles of 30 amps or less shall have GFCI protection for personnel
11. All GFCI breakers or receptacles shall be a class "A" GFCI (maximum of 6MA trip settings)
12. Branch circuits in any raceway serving temporary power receptacle outlets that is not continuous (has a coupling in the run) shall have an equipment grounding conductor installed
13. All covers are to be in place and breakers identified
14. All openings in dead-front covers shall be closed
15. Extension cords used for temporary power are to be for extra-hard usage as described in Article 400 and protected from accidental damage

Note: This is not a complete list and is not inclusive of all construction methods, materials or practices. Check Lists are intended to serve as a reference point for a basic inspection only. Compliance with all the provisions of applicable codes shall be required.

RESIDENTIAL TEMPORARY POWER POLE (3380)

PAGE 1 of 1

PLUMBING GENERAL

Notes and Considerations

Plumbing plans are not required in residential applications with the exception of gas drawings or isometrics. Gas plans may be drawn by the contractor of record or a Nevada Design Professional.

General Inspections

1. Verify fixture counts
2. Proper fittings for directional changes
3. All piping wrapped (protected) or sleeved passing through concrete
4. Verify from plot plan requirements for backwater valves and static water pressure requirements

Prohibited Fittings

1. Combination fittings used to catch fixture trap arms
2. Sanitary tee on its back (drainage)
3. Horizontal wet venting
4. Double combination fitting use in the horizontal
5. Side inlet ¼ bend fitting
6. Double Wisconsin or Nawlins fitting (single are ok)
7. Trap and trap arm shall be the same size (reduction may be made on the inlet side of the trap only)

Note: This is not a complete list and is not inclusive of all construction methods, materials or practices. Check Lists are intended to serve as a reference point for a basic inspection only. Compliance with all the provisions of applicable codes shall be required.

GENERAL PLUMBING

PAGE 1 of 1

UNDERGROUND PLUMBING (4412)

Drain, Waste and Vent Piping

1. Sizing per Table 7-3 and 7-5 (don't forget the footnotes)
2. Cleanout sizing per Table 7-6
 - a. **1 ½ inch pipe 1 ½ inch c.o.**
 - b. **2 inch pipe 1 ½ inch c.o.**
 - c. **2 ½ inch 2 ½ inch c.o.**
 - d. **3 inch 2 ½ inch c.o.**
 - e. **4 & larger 3 ½ inch c.o.**
3. Cleanout with raised square heads, or slotted heads
4. **10 foot** head water test, or **5 pound** air test
5. **¼ inch** per foot minimum fall or grade (1/8 for 4 inch pipe and larger)
6. Connection of building sewer to utility required
7. Cleanouts installed at underground or locations marked with a brightly colored paint
8. Cleanouts shall be at all “sink locations”, urinals, and horizontal changes of direction exceeding **135 degrees** and horizontal drain lines greater than **5 feet** off the main line
9. Back water valves where required by site plan

Note: This is not a complete list and is not inclusive of all construction methods, materials or practices. Check Lists are intended to serve as a reference point for a basic inspection only. Compliance with all the provisions of applicable codes shall be required.

RESIDENTIAL UNDERGROUND PLUMBING (4412)

PAGE 1 of 1

WATER PIPING (4425)

1. Sizing per Table 6-4 and 6-5 (remember the footnotes)
2. Backflow devices Table 6-2
3. Minimum air gap Table 6-3
4. Air chamber devices Table 6-6
5. Pressure regulator valve (PRV) required where the psi is greater than **80 psi**
6. Accessible strainer ahead of PRV or integral of the device
7. Minimum of **12 inches** of cover on piping below grade
8. Proper sleeving methods on copper piping below grade and passing through concrete
9. Pex piping installed to manufacturers' installation instructions and supported at **32 inches** on center
10. Pex piping to have "slack" for expansion and contraction
11. PE in stem wall, sleeved, sleeve to be a minimum **6 inches** above stem wall with the PE termination **6 inches** above the sleeve before any transition
12. Piping within **1 inch** of edge of framing members shall be protected by 18 gauge nail plates
13. Water lines should have working pressure on the system or a **50 psi** air test
14. All water piping shall be supported per Table 3-2
15. Check for water hammer arresters at quick closing valves in copper piping systems

Note: This is not a complete list and is not inclusive of all construction methods, materials or practices. Check Lists are intended to serve as a reference point for a basic inspection only. Compliance with all the provisions of applicable codes shall be required.

RESIDENTIAL WATER PIPING (4425)

PAGE 1 of 1

GAS PIPING (4422)

Gas Piping General

1. Sizing of gas system per Table 12-1 and 12-3 (low pressure)
2. Metal gas systems to be a minimum of **6 inches** above grade or structure
3. Support per Table 3-2 and 12-2
4. Shut off valves shall be accessible and installed outside of the appliance
5. Shut off valves located in the attic shall be above the insulation and above the platform on the firebox side of the appliances

Underground Gas Piping

1. PE tubing buried below grade a minimum of **18 inches** to top of pipe
2. PE installations using heat fusion shall have the applicators card on site
3. 18 gauge yellow tracer wire shall be attached to the PE piping and extended a minimum of **6 inches** above grade on each end
4. Metallic gas piping buried below grade shall be a minimum of **12 inches**
5. Metallic gas piping below grade shall be factory coated pipe with all pipe scrapes and fittings protected with a minimum of four wraps of **ten mil** tape
6. No gas piping shall be installed under any building or structure unless properly sleeved and vented
7. Sleeves shall be minimum schedule 40 and $\frac{1}{2}$ **inch** larger than pipe and **12 inches** beyond slab
8. When beneath concrete sleeving shall be in place and vented to the atmosphere
9. Copper tube gas piping applications rated K, L or ACR are allowed

Note: This is not a complete list and is not inclusive of all construction methods, materials or practices. Check Lists are intended to serve as a reference point for a basic inspection only. Compliance with all the provisions of applicable codes shall be required.

RESIDENTIAL GAS PIPING (4422)

PAGE 1 of 1

ROUGH PLUMBING (TOP-OUT) (4441)

1. Pipe and fittings properly used and supported
2. Piping within **1 inch** of edge of framing members shall be protected by 18 gauge nail plates
3. Tub and shower pans installed per manufacturers' installation instructions
4. Nail or screw in each of the flange holes for showers and tubs
5. Access panel to Jacuzzi pump and GFCI outlet
6. Water closet flanges measured for side and back clearances
7. Joints at roof around pipes to be water tight by approved flashing material
8. Check all supports of piping according to Table 3-2
9. Trap arm lengths:

1 ½	3 feet, 6 inches
2	5 feet, 0 inches
3	6 feet, 0 inches
10. Trap arm minimum length two times the diameter of the trap arm
11. Trap arm may be increased one pipe size as long as the trap arm is the same as the trap
12. Back to back or side to side fixtures use double fixture fitting
13. Second floor – check tub and shower pans are filled with water for test
14. Second floor – Closet flange holes shall be filled with corrosion resistant screws
15. Access panels minimum **12 inches** by **12 inches** for concealed slip joints
16. Clothes washer standpipe minimum **18 inches**, maximum **30 inches** above the trap weir
17. Island sink vented properly to the nearest wall and foot vent to have cleanout
18. Vent piping terminating a minimum of **6 inches** above the roof
19. Vents shall rise a minimum of **6 inches** above flood rim of the fixture with drainage fittings
20. All vents shall be level or grade back to the fixture before offsetting horizontally
21. Aggregate vent area shall not be less than the minimum building drain
22. Wet vent limited to one and two fixture unit fixtures and vertical applications only
23. Wet vent piping to be one pipe size larger than the upper most fixture
24. Minimum size wet vent **2 inches**
25. Wet vent shall be in the same story
26. All needed cleanouts shall be installed and accessible
27. Clean out extensions shall be from a wye or wye and 1/8 bend
28. No cleanouts required above the first floor

Note: This is not a complete list and is not inclusive of all construction methods, materials or practices. Check Lists are intended to serve as a reference point for a basic inspection only. Compliance with all the provisions of applicable codes shall be required.

RESIDENTIAL ROUGH PLUMBING (TOP-OUT) (4441)

PAGE 1 of 2

29. Pex piping supported every **32 inches** horizontally or per manufacture
30. A full way valve shall be installed on the cold water supply piping
31. Shower and tub/shower combination shall have individual control valves of the pressure balance or thermostatic mixing valve types for scald protection
32. An expansion tank or temperature relief valve shall be installed on the cold side of the water heater to control thermal expansion
33. A full way valve shall be installed on the cold side of the water heater supply
34. A temperature and pressure relief line shall be installed at the water heater and terminated to the outside of the building
35. Water heater shall be on a stand a minimum of **18 inches** from the floor to the burner or element. In the 2000 UPC/UMC, if the equipment has a sealed combustion chamber, the equipment may sit directly on the garage floor
36. Water heaters in furred space shall have a corrosion resistant pan with a minimum $\frac{3}{4}$ **inch** drain
37. Water heaters and other mechanical equipment shall be protected from damage by adequate barriers
38. Built up shower pans shall have water proof membrane and 2 part drain installed for test up to dam level

B-Vents

1. Minimum clearances to combustibles will be stamped on the B-Vent section
2. Directional arrows shall be pointed upward
3. Shall terminate a minimum of **4 feet** from any vertical surface
4. No limit on **45⁰ degree** offsets
5. Only one **60⁰ degree** offset permitted
6. Minimum vent size of **3 inches**
7. Shall terminate **1 foot** above the roof into an approved vent cap
8. vents **4 feet** from property lines

Combustion Air Openings

1. If the volume of the area in which gas fired appliances are located is equal to 50 cubic feet per 1000 BTU's, combustion air openings are not required
2. See Chapter 5, Table 5-2. Take the volume of the room; width times length times height (maximum height 8 feet) WxLxH. This number, when greater than the BTU rating of the appliance, needs no additional combustion air

Note: This is not a complete list and is not inclusive of all construction methods, materials or practices. Check Lists are intended to serve as a reference point for a basic inspection only. Compliance with all the provisions of applicable codes shall be required.

RESIDENTIAL ROUGH PLUMBING (TOP-OUT) (4441)

PAGE 2 of 2

FINAL PLUMBING (4499)

1. Verify working clearances for cleanouts
2. Verify all backflow prevention devices are installed
3. If property has irrigation, verify that pressure vacuum breaker is installed a minimum of **12 inches** above all downstream piping
4. **1 inch** air break at water softener backwash line terminating in washer box
5. Main water shut-off shall be accessible and not in contact with soil
6. Dishwasher air gap fitting shall be a minimum of **1 inch** above flood level rim of the sink
7. Verify water conservation aerators are in place
8. Locate all cleanouts and verify accessibility
9. No double traps on any fixtures
10. Water heater set level
11. T & P terminated minimum **6 inches**, maximum **24 inches** above grade and pointing downward
12. Single wall vent connectors to be a minimum of **6 inches** from combustibles
13. Combustion air requirements met in garage and attic
14. Gas valves installed and properly capped or plugged
15. Final gas test air pressure at minimum **10 psi for 15 minutes** (low pressure) Gauge to be max 2 times test pressure and 1/10 pound increments
16. **60 psi for 30 minutes** (medium pressure) Gauge to be max 2 times test pressure and 1 pound increments
17. If gas test passes, issue gas tag
18. Hot water heater seismic zone strapping shall be a minimum of two straps; one in the upper one-third and one in the bottom one-third and/or **4 inches** above the controls
19. Gas flex connectors maximum length **3 feet**, except range max **6 feet**
20. Gas flex connector to be rated for the BTU demand

Vent Connectors

1. Single wall metal pipe cannot be in a concealed location
2. Minimum **6 inches** separation from combustibles for single wall
3. Connectors shall rise a minimum of **¼ inch** per foot
4. A minimum of three sheet metal screws shall attach the single wall to the draft diverter and single wall to the B-Vent
5. Roof termination shrouds must be listed for system used

Note: This is not a complete list and is not inclusive of all construction methods, materials or practices. Check Lists are intended to serve as a reference point for a basic inspection only. Compliance with all the provisions of applicable codes shall be required.

RESIDENTIAL FINAL PLUMBING (4499)

PAGE 1 of 1

MECHANICAL INSPECTION CHECKLIST

General Notes

Mechanical plans are not required in residential applications with the exception of gas piping drawing or isometrics. Gas plans may be drawn by the Contractor of Record or the Nevada Design Professional.

Rough Mechanical (5551)

1. Verify HVAC equipment sizes, BTU ratings and location requirements per name plate listing
2. Verify clearances and approved uses (indoor, outdoor, vertical or horizontal applications)
3. Minimum size attic access openings 22 inches by 30 inches, or largest piece of equipment to remove
4. Catwalk minimum **2 feet** wide and maximum **20 feet** long working platform and minimum clearances
5. Gas shut off shall be accessible and within **3 feet** of the appliance, if required
6. Combustion air opening requirements, if applicable using Table 7-1 UMC
7. Condensing line set insulated, supported and attachment to unit and exit through a wall supported flashing.
8. The line set shall be sealed at the exterior and protected from damage
9. Condensate waste line terminate primary to the exterior
10. Condensate lines: secondary shall terminate in a visible location for quick detection
11. Condensate lines shall be properly supported per Table 3-2 UPC (PVC every **4 feet** horizontally)
12. If PVC piping is used for condensate lines, the piping shall have primer applied to all pipes and fittings before gluing
13. Duct sizes, locations and UL-181 listings, class 1 flex duct
14. Check flex duct for support every **4 feet**, sags, kinks, mechanical bands and proper connections UL-181 tape
15. Supply registers supported on two opposite sides
16. Return air grills supported on all sides
17. Proper insulation of ducts, wye branches, connections, fittings and metal plenums with minimum R-6 insulation or per Energy calculations

Note: This is not a complete list and is not inclusive of all construction methods, materials or practices. Check Lists are intended to serve as a reference point for a basic inspection only. Compliance with all the provisions of applicable codes shall be required.

RESIDENTIAL ROUGH MECHANICAL (5551)

PAGE 1 or 2

Vents

1. B-Vent supported with min 1 inch clearance to combustibles, with flow up
2. Horizontal run limited to 75% of vertical height
3. Offsets limited to one not more than 60⁰
4. Termination min **4 feet** from property line, roof slope and property lines
5. Size of B-Vent per unit output

Environmental Air Duct

1. Dryer Vents – Kitchen Exhausts – Bathroom Exhaust Fans
2. Kitchen hood duct smooth interior
3. Verify size, length and support ducts
4. Dryer exhaust – **14 feet** with 2-90's rule. In excess of this rule, the duct sizes and length shall be engineered and on site
5. No screws in dryer vent connections
6. Vent terminations to have back draft dampers
7. Dryer vent requires a non-screened back draft damper. Back draft dampers are not required when terminating in the vertical position
8. Verify means for natural ventilation for bath, water closets areas or provide exhaust 50 cfm fan

Manufactured Fireplaces

1. All fireplaces shall be installed per the manufacturer's installation instructions, including mantles, clearances and venting
2. Check fire stopping
3. Standoffs not removed (no combustibles below stand-offs)
4. Check combustion air per the appliance listing and Chapter 7
5. Remove all loose material from fireplace chase (wood/paper/insulation) per its listing for distance to combustibles

Outdoor Fireplaces

1. All fireplaces shall be installed per their listing
2. Fireplace use in an outside application shall be listed for external use
3. Non-listed fireplaces will be reviewed and plans check approved for use as an alternate method on a case by case basis
4. Decorative fire rings, or fire pits listed appliances ONLY
5. All shut off valves within 3 feet and per the plumbing code

Note: This is not a complete list and is not inclusive of all construction methods, materials or practices. Check Lists are intended to serve as a reference point for a basic inspection only. Compliance with all the provisions of applicable codes shall be required.

RESIDENTIAL ROUGH MECHANICAL (5551)

PAGE 2 of 2

FINAL MECHANICAL (5599)

1. Verify equipment placement, installation and identification
2. Equipment in garages, with ignition sources, to be minimum **18 inches** above the floor
3. Duct penetration through garage membrane shall be a minimum of 26 gauge thickness with no openings into the garage area
4. Equipment installed at grade level shall be supported on a level non-combustible platform a minimum of **3 inches** above final grade
5. Verify disconnect and over current protection within sight of each piece of equipment
6. Verify all registers and filters are installed
7. Verify that the thermostat is installed
8. Decorative appliances shall be installed per their listing with logs, glass doors, ember strip
9. Decorative appliance dampers shall be permanently blocked open
10. Verify vent connectors for clearances and terminations with approved caps
11. Verify exhaust terminations for screens and operation of dryer back draft damper as required for environmental air ducts
12. Verify combustion air duct requirements and location
13. Verify protection of equipment in garages by bumper guards, bollards, raised platform or outside the travel path of traffic
14. Gas line flex connectors not through metal housing of appliance and maximum **3 feet** long
15. Gas flex to be sized to meet BTU demand of appliance

Note: This is not a complete list and is not inclusive of all construction methods, materials or practices. Check Lists are intended to serve as a reference point for a basic inspection only. Compliance with all the provisions of applicable codes shall be required.

RESIDENTIAL FINAL MECHANICAL (5599)

PAGE 1 OF 1