Town of Star Valley Ranch
Builder's Construction Checklist

This checklist contains a majority of the code requirements for the way homes and garages are typically constructed in the Town of Star Valley Ranch and covers what the building inspector will be looking for during his inspections. It is not intended to be totally comprehensive. Please consult the 2006 International Residential and Building Code books and the Ordinances of Star Valley Ranch for more details.

Site Plan Requirements

_____Prior to applying for a building permit you must have survey markers established at all corners of the property. Identify markers using a highly visible brightly colored three foot high post, with the top foot painted. This must be in place before calling for a site inspection and a Stage 3 and Foundation Inspection.

_____Draw plan to standard scale showing scale, property corners, property lines, north arrow, setbacks, ALL utilities, driveways, existing structures and proposed structures.

_____ Site Plan must comply with the Town of Star Valley Ranch Zoning Ordinances and other applicable ordinances and regulations.

Sec. R301 Design Criteria

_____Comment on plans appropriate design criteria, e.g. Roof Snow Load 100psf live load, Wind Speed 90mph, Seismic Design Category D2, Weathering Severe, Frost Line Design Depth 36", etc.

Sec. R303 Light, Ventilation and Heating

_____All habitable rooms are to have windows or doors with an area equal to 8% of the room's floor area, with a minimum of ½ that area being openable for ventilation. Show window sizes and the amount of openable area.

_____There is an exception for using mechanical ventilation and artificial lighting to provide required light and ventilation. If using this exception show mechanical system and distribution (cfm).

_____Bathrooms and water closet compartments need 3 square feet of window, ½ of which is openable, or exhaust fan rated for 50 cfm intermittent or 20 cfm continuous ventilation.

_____Stairways and their landings are required to be illuminated. Interior stairways require switching at the top and bottom.

_____The heating system must be capable of maintaining 68F at a point 3' above the floor in all habitable rooms.

_____Show detail for the under floor space between the bottom of the floor joists and the earth under any building (except space occupied by a basement or cellar). Include ventilation detail.

Sec. R304 Minimum Room Areas

_____Every Dwelling unit is required to have one habitable room that has not less than 120 square feet of gross floor area.

_____Other habitable rooms shall have an area of not less than 70 square feet and shall not have horizontal dimensions of less than 7'. Exception: kitchens

_____Portions of a room with a sloping ceiling less than 5' or a furred ceiling measuring less than 7' shall not be considered as contributing to the minimum required habitable area for that room.

Sec. R306 Sanitation

_____Every dwelling unit shall be provided with a kitchen area and a sink in that area.

Sec. R308 Glazing (the following locations need safety glazing)

_____Glazing in doors and enclosures for hot tubs, saunas, steam rooms, bathtubs and shower; Glazing in any part of the building wall enclosing these compartments where the bottom exposed edge of the glazing is less than 60" above the floor or walking surface.

_____Glazing adjacent to doors when the nearest edge is within a 24" arc of the door in the closed position and whose bottom edge is less than 60" above the floor.

_____Glazing meeting all the following conditions, exposed area of an individual pane greater than 9 square feet, bottom edge less than 18" above the floor, top edge greater than 36" above the floor and one or more walking surfaces within 36" horizontally of the glazing.

_____All glazing in railings.

_____Glazing in walls and fences enclosing indoor and outdoor swimming pools, hot tubs and spas where the bottom edge of the glazing is less than 60" above the walking surface and within 60" horizontally of the water's edge.

_____Glazing adjacent to stairways, landings and ramps within 36" horizontally of a walking surface when the exposed surface of the glass is less than 60" above the walking surface.

_____Glazing adjacent to stairways within 60" horizontally of the bottom tread of a stairway in any direction when the exposed surface of the glass is less than 60" above the nose of the tread.

Sec. R309 Garages

_____Openings from the garage to the dwelling unit shall be protected by a solid wood door not less than 1 3/8" in thickness, a solid or honeycomb steel door not less than 1 3/8" thick or a 20 minute rated fire door.

_____Ducts in the garage and duct penetrating the walls or ceilings separating the dwelling from the garage shall be constructed of a minimum 26 gage steel and have no openings.

_____The garage shall be separated from the residence and its attic area by not less than 5/8" type X sheetrock applied to the garage side. Garages beneath habitable room shall be separated from the habitable room by 5/8" type X sheetrock. Where the separation is a floor ceiling assembly, the structure supporting the separation shall also be protected by not less than 5/8" type X sheetrock.

_____Garage floor surfaces shall be of concrete or approved substitute. Garage floor shall slope to a drain or toward the main vehicle entry doorway.

Sec. R310 Emergency Escape and Rescue Openings

_____Emergency escape and rescue openings shall comply with all the following dimensions. Maximum sill height-44"; Minimum opening area-5.7 square feet; (Grade floor openings 5 square feet) Minimum opening height-24"; Minimum opening width-20"

_____Basements with habitable space and every sleeping room shall have at least one openable emergency escape and rescue opening. Where basements contain one or more sleeping rooms, emergency egress and rescue openings shall be required in each sleeping room, but shall not be required in adjoining

areas of the basement. For basements with bedrooms requiring window wells the minimum horizontal area of the window well shall be 9 square feet with a minimum horizontal projection and width of 36". The area of the window well shall allow the emergency escape and rescue opening to be fully opened. Window wells with a vertical depth greater than 44" shall be equipped with a permanently affixed ladder or steps (the ladder or steps may encroach a maximum of 6" into the required dimension of the window well) usable with the window in the fully opened position. Ladders or rungs shall have an inside width of at least 12", shall project at least 3" from the wall and shall be spaced not more than 18" on center vertically for the full height of the window well.

Sec. R311 Means of Egress

_____Each dwelling unit shall have not less than 1 exit door. This door must provide direct access to the exterior without requiring travel through a garage.

_____The required exit door shall be a side-hinged door not less than 3' in width and not less than 6' 8" in height.

_____There shall be a floor or landing on each side of an exterior door. The floor or landing shall not be more than 1.5" lower than the top of the threshold. Exception: The landing at an exterior doorway shall not be more than 7 ¾" below the top of the threshold provided the door does not swing over the landing.

_____The width of each landing shall not be less than the door or stairway served. The landing shall be at least 36" measured in the direction of travel.

_____The minimum width of a hallway shall not be less than 3'.

_____Plans must show stair detail.

_____There shall be a floor or landing at the top and bottom of each stairway. Exception: 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.

_____Handrails shall be provided on at least one side of each continuous run of treads or flight with 4 or more risers. Handrails shall be continuous for the full length of the flight and the handrail ends shall be returned or terminate in newel posts. This includes exterior.

_____Handrail height shall be not less than 34" and not more than 38". All stairs shall be illuminated. This includes exterior.

_____Handrails adjacent to a wall shall have a space of not less than 1 ½" between the wall and the handrail. Handrails with a circular cross section shall have a diameter of at least 1 ¼" and not greater than 2". Handrails with a non-circular profile shall have a perimeter dimensions of at least 4" and not greater than 6 ¼" with a maximum cross section of 2 ¼". This includes exterior.

Sec. R312 Guards

_____Guardrails for porches, decks, balconies or floor surfaces more than 30" above floor or grade shall have guardrails at least 36" high and for the open side of stairs the guardrail must be at least 34".

_____Guardrails are to have intermediate members such that passage of a 4" diameter sphere is not possible.

Sec. R313 Smoke Alarms

_____Smoke detectors are required in the following locations: in each sleeping room, outside each sleeping area in the immediate vicinity of the bedrooms and on each additional story. In trayed or vaulted ceiling rooms (over 24") requiring smoke detectors, the detectors need to be in the raised section.

_____Smoke detectors shall be hardwired, interconnected and have battery backup.

Sec. R319 Protection Against Decay

_____Decay resistant wood is required in the following locations: Wood joists or the bottom of a wood structural floor less than 18" from exposed ground. Wood girders closer than 12" to exposed ground. Sill plates less than 8" from exposed ground. Sills and sleepers on a concrete slab that is in direct contact with the ground, unless separated from such slab by an impervious moisture barrier. The ends of wood girders entering an exterior masonry or concrete wall having a clearance of less than ½" on tops, sides, and ends. Wood siding, sheathing and wall framing on the exterior of a building having a clearance of less than 6" from the ground.

_____Fasteners (bearing plate washers, nails that attach floor joists, nails through shear wall into treated plate and any hardware) for pressure preservative and fire retardant treated wood shall be of hot dipped galvanized steel, stainless steel, silicone bronze or copper. Exception: ½" diameter or greater steel bolts.

Sec. R321 Site Address

_____Street numbers shall be posted so as to be visible from the street.

Sec. R401 Foundations

_____Show appropriate foundation detail.

_____Surface drainage shall be diverted to a storm sewer conveyance or other approved point of collection so as to not create a hazard. Lots shall be graded so as to drain surface water away from foundation walls. The grade away from foundation walls shall fall a minimum of 6" within the first 10'. Exception: Where lot lines, walls, slopes or other physical barriers prohibit 6" of fall within 10', drains or swales shall be provided to ensure drainage away from the structure.

Sec. R403 Footings

_____All footings shall be at least 36" below grade. Exceptions: 1) Free-standing accessory structures with an area of 600 square feet or less and an eave height of 10' or less. 2) Decks not supported by a dwelling.

_____Footing details shall be shown in drawings.

_____All exterior footings shall be placed at least 36" below the undisturbed ground.

_____All exterior footings shall be run in a continuous fashion. Other footing applications may be acceptable with approval of a Civil or Structural Engineer.

_____The top surface of footings shall be level. The bottom surface of footings shall not have a slope exceeding one unit vertical in ten units horizontal (10% slope). Footings shall be stepped where it is necessary to change the elevation of the top surface of the footings or where the slope of the bottom surface of the footings will exceed one unit vertical in ten units horizontal (10% slope).

_____The wood sole plate at exterior walls on monolithic slabs and wood sill plate shall be anchored to the foundation with anchor bolts spaced a maximum of 6' on center for a single story dwelling. The maximum anchor bolt spacing shall be 4' for buildings over two stories in height. There shall be a minimum of two bolts per plate section with one bolt not located more than 12" or less than seven bolts diameters from each end of the plate section. Bolts shall be at least ½ in diameter and shall extend a minimum of 7" into masonry or concrete. Anchor bolts shall be a minimum of 10" long and be on job site prior to stem wall or slab pour that requires foundation anchorage. 3" x 3" x ¼" galvanized bearing plates are required to fasten treated sill plates to foundation.

Sec. R404 Foundation Walls

_____All foundation walls shall be shown on plans.

Sec. R406 Foundation Damproofing

_____Foundation walls that retain earth and enclose habitable or useable spaces located below grade shall be damproofed with a bituminous coating.

Sec. R502 Floor Framing

_____Floor joists are to be sized in accordance with Tables R502.3.1 (1) and R502.3.1 (2), if standard lumber, or for manufactured floor systems as per the manufacturers specifications.

_____Cantilevers are to be sized in accordance with Tables R502.3.3 (1) and R502.3.3 (2), if standard lumber, or for manufactured floor systems as per the manufactures specifications.

_____The ends of standard wood joists, beams or girders shall have not less than 1 ½" of bearing on wood or metal and not less than 3" of bearing on concrete or masonry. Approved joist hangers may be used as an alternative.

_____Floor systems having joists framing from opposite sides over a bearing support are to be tied together by lapping the joists at least 3" and face nailing with at least 3 10d nails minimum. A wood or metal splice with equal strength is also allowed.

_____Joists framing into the side of a wood girder are to be supported by approved framing anchors or on ledger strips not less than nominal 2" x 2".

_____Joists are to be supported laterally at the ends by full-depth solid blocking not less than 2" in thickness; or by attachment to a header, band or rim joist.

_____Post and beam or girder construction needs to have positive connection to prevent uplift and lateral displacement.

Sec. R503 Floor Sheathing

_____Wood structural panel sheathing is to be in accordance with Table R503.2.1.1 (1) and shall be fastened in accordance with Table R602.3 (1).

Sec. R506 Concrete Floors

_____Concrete floors are to be a minimum of 3 ½" thick on prepared base.

_____Concrete slabs below grade shall be placed over a complying vapor barrier.

Sec. R602 Wall Framing

_____Compressible floor covering materials shall not extend beneath walls, partitions or columns, which are fastened to the floor.

_____Studs shall be a minimum of No. 3, Standard or stud grade lumber. Exception: Bearing studs not supporting floors and non bearing studs may be utility grade lumber provided the studs are spaced in accordance with Table R602.3(5).

_____The size, height and spacing of studs shall be in accordance with Table R602.3 (5). Exceptions: 1) Utility grade studs shall not be spaced more than 16" o.c., shall not support more than a roof and ceiling and shall not exceed 8' in height for exterior walls and load bearing walls or 10' for interior non load bearing walls. 2) Studs more than 10' in height which are in accordance with Table R602.3.1.

_____Exterior wall studs are to be capped with a double top plate installed to provide overlapping at corners and intersections with bearing partitions. End joints in top plates are to be offset at least 24". A single top plate is permitted in bearing and exterior walls, provided the plate is adequately tied at joints,

corners and intersecting walls by a minimum 3" x 6" x .036" thick galvanized steel plate that is nailed to each wall or segment of wall by six 8d nails on each side, provided the rafters or joists are centered over the studs with a tolerance of no more than 1". The top plate may be omitted over lintels that are adequately tied to adjacent wall with steel plates or equivalent as previously described.

_____Where joists, trusses or rafters are spaced more than 16" o.c. and the bearing studs below are spaced 24" o.c. such members shall bear within 5" of the studs beneath. Exception: If the top plates are two 2" x 6" or two 3" x 4" members.

_____Studs shall have full bearing on a nominal 2" or larger plate or sill having a width at least equal to the width of the studs.

_____Interior load bearing walls shall be constructed, framed and fire blocked as specific for exterior walls.

_____Interior nonbearing walls may be constructed with 2" x 3" studs spaced 24" o.c. or when not a part of braced wall line, 2" x 4" flat studs spaced at 16" o.c.. Interior nonbearing walls shall be capped with at least a single top plate.

_____Fire stopping is to be provided to cut off concealed draft openings, both vertical and horizontal and to form an effective fire barrier between stories, and between the top story and the roof space. Fire stopping is required in the following locations: In concealed spaces of stud walls and partitions, vertically at the ceiling and floor levels and horizontally at intervals not exceeding 10'. At interconnections between concealed vertical and horizontal spaces, such as occur at soffits, dropped ceilings and cove ceilings. In concealed spaces between stair stringers at the top and bottom of the run. At openings around vents, pipes and ducts at ceiling and floor level, with an approved material to resist free passage of flame and products of combustion. Fire blocking of cornices of a two family dwelling is required at the line of dwelling unit separation.

_____Except as provided around vents, pipes and ducts above, fire stopping shall consist of 2" nominal lumber, 23/32" wood structural panels with joints backed with the same material, ¾" particleboard with joints backed by the same material, ½" sheetrock or ¼" cement based millboard. Batts or blankets of mineral wool or glass fiber installed in such a manner as to be securely retained in place may be used as an acceptable fire block.

_____Foundation cripple walls are to be framed with studs not less in size than the studding above. When exceeding 4' in height, such walls shall be framed of studs having the size required for an additional story.

Sec. R702.3 Gypsum Board

_____Water resistant gypsum board cannot be used on ceilings with framing spaced 24" o.c..

_____Water resistant gypsum board shall not be installed over a vapor retarder in a shower or tub compartment.

Sec. R703 Exterior Covering

_____Exterior walls shall provide the building with a weather resistant exterior wall envelope. Siding shall be installed in accordance with Table R703.4.

Sec. R802 Wood Roof Framing

_____Show appropriate roof and truss plans e.g. the roof system must support a 100psf live snow load. Also show roof covering detail.

_____Allowable spans for ceiling joists are contained in Tables R802.4 (1) and R802.4 (2).

_____Roof trusses shall be braced to prevent rotation and provide lateral stability in accordance with the construction documents for the building and the design drawings for the trusses.

_____Trusses shall be connected to wall plates with approved connectors having a resistance to uplift specified in engineered truss design drawings.

_____Roof assemblies which are subject to wind uplift pressures of greater than 20psf shall be connected to the wall with connections capable of providing the resistance to uplift required by civil or structural engineering design.

Sec. R806 Roof Ventilation

_____Enclosed attics and enclosed rafter spaces formed where ceilings are applied directly to the underside of roof rafters shall have cross ventilation for each separate space. The minimum net free area of ventilation required is 1 to 150 of the area of the space ventilated. If high low vents are used ventilating area can be reduced to 1 to 300.

_____When eave or cornice vents are used, a minimum of 1" space shall be provided between the insulation and the roof sheathing at the location of the vent.

Sec. R807 Attic Access

_____In buildings with combustible ceiling or roof construction an attic access shall be provided to attic areas that exceed 30 square feet and have a vertical height of 30" or greater.

_____The attic access shall have a minimum rough opening of 22" x 30" and shall have at least 30" of unobstructed headroom. Attic access openings shall be located in a hallway or other readily accessible location.

_____The attic access in attached garages must maintain proper fire separation.

Sec. N1101 Energy Efficiency

_____Maximum glazing U factor is .35.

_____Minimum ceiling insulation R-value is R-49. Exception: where the construction method allows the full R-value to extend over the wall plate, then R-38 is acceptable.

_____Minimum wall insulation R-value is R-21.

_____Minimum floor insulation R-value is R-21.

_____Minimum basement wall insulation R-value is R-13.

_____Minimum slab perimeter insulation R-value and depth is R-18, 3'.

_____Minimum crawl space wall insulation R-value is R-10.

_____Minimum gas furnace efficiency is AFUE 78%.

_____Minimum split system air conditioner efficiency is 10.0 SEER.

Sec. M1305 Appliance Access

_____30" of working space shall be provided in front of the control side of the appliance.

Sec. M1701 Combustion Air

_____Where the volume of the space in which fuel burning appliances are installed is less than 50 cubic feet per 1000 Btuh, then outside combustion air in the amount determined by the code must be provided.

Appendix F Radon Control

_____Plans shall indicate radon control methods