Category	Name	Description
Building Site	OKR10 Permit Requirements	(OKR10 & SWPPP) Any of the following may be out of compliance with the ODEQ stormwater requirements for small-lots: 1. Missing driveway culvert (temp. or permanent) 2. Missing erosion and sedimentation control devices (silt fencing, silt dikes, straw waddles, sod, etc.) 3. Missing garbage containment 4. Missing construction entrance (gravel to prevent track-out) 5. Missing porta-potty 6. Blown garbage
Concrete Slab	Vapor Retarder	The vapor retarder shall be installed under the slab per the approved plans. Minimum 6-mil polyethylene or approved method. [R506.2.3 & 1805.2]
Concrete Slab	Slab	Slab thickeness and/or reinforcement not per approved plan or IAW IRC R506 or ACI 332. (3.5" thick on good soil, expansive soils requires special instruction R403.1.8)
Concrete Slab	Vapor Retarder	The vapor retarder shall be installed under the slab per the approved plans. Minimum 6-mil polyethylene or approved method. IRC R506.2.3
Electrical Rough	UFER / Ground Rods	Provide UFER Ground (concrete-encased electrode) with a minimum embedment of 20' or other approved grounding method. NEC 250.52
Electrical Rough	UFER/Ground Rods	Provide UFER ground (concrete-encased electrodes) with a minimum embedment of 20' or other approved grounding method. NEC 250.52
Electrical Rough	Grounding electrode Conductor Required	All inverters shall have a grounding electrode conductor (GEC) with a minimum #8 AWG copper wire. NEC 3607.4
Electrical Rough	Two dedicated Circuits to Kitchen	Receptacles serving kitchen countertops shall be supplied by a minimum of two dedicated circuits NEC 3703.2
Electrical Rough	Kitchen Island Receptacles	Atleast one receptacle shall be installed at each island countertop space NEC 3901.4.2
Electrical Rough	Smoke Alarms (Residential)	Smoke alarms shall be located in each sleeping room, outside each sleeping room, on each story. IRC 314.3
Electrical Rough	Carbon Monoxide Alarms	Carbon monoxide alarms shall be located on each story and outside each sleeping room when there is a fuel-burning appliance, fireplace or attached garage. IRC 315.2.1
Electrical Rough	Garage Receptacle	Attached garages and detached garages with electrical shall have atleast one one receptacle in each bay. IRC 3901.9
Electrical Rough	Exterior Receptacles	In one and two family dwellings, a readily available receptacle shall be installed in the front and back of the dwelling. IRC 3901.7
Electrical Rough	Deck Receptacle	Balconies, decks and porches attached to and accessible from the dwelling shall have atleast one receptacle. Receptacle shall not be higher than 6'6 from the foundation. IRC 3901.7
Electrical Rough	Convenience Outlet Required	A convenience outlet shall be provided no closer than 6' and no more than 20' from the inside wall of the pool. This outlet shall be GFCI protected. IRC 4203.1.2
Electrical Rough	Electriacl Within 5' of pool	Underground wiring shall not be permitted under the pool or within the area extending 5 feet horizontally from the inside wall of the pool. IRC 4203.7
Electrical Rough	Overhead Utilities	Overhead utilities within the pool area shall be a minimum of 22'6
Electrical Rough	GFCI Breakers For Pumps	Outlets supplying pool pumps shall be GFCI protected. IRC 4203.1.3
Electrical Rough	Corrosion Resistant Conduit	Corrosion restant conduit shall be used for all underground runs and installations. IRC 4203.7
Electrical Rough	Grounding Electrode System	Each building requires its own Grounding Electrode System (GES) IRC 3608.1
Electrical Rough	Isolate Neutral at Subpanel	Isolate neutral from equipment grounding conductor (EGC) at subpanel IRC 3603.1.4
Electrical Rough	Main Service Disconnect Required	Service equipment shall have a disconnecting means to disconnect all coductors in a building from service entrance conductors. IRC 3601.6.2
Electrical Rough	Readily Accessible Disconnect	Service disconnect shall be installed at a readily accessible location,either outside the building or inside at the nearest point of entrance. IRC 3601.6.2
Electrical Rough	100A Minimum Service SFR	Single family dwelling service equipment disconnecting means shall be a minimum 100 AMP IBC 3603.1.1
Electrical Rough	Securing Wire At Boxes	NM (Romex) wiring shall be secured within 12'' of every electrical box and at intervals not exceeding 4' 6'' across framing members. IRC 3904.3
Electrical Rough	GFCI Circuits	GFCI protection of receptacles shall be provided in bathrooms, garages, accessory buildings, outdoors, crawl spaces, unfinished basements, kitchens, dishwashers, within 6 feet of all sinks & bathtub/showers, and laundry areas. IRC 3901.9
Final Electrical	Label Breakers	Legibly and permanently mark all breakers. IRC 3403.3
Final Electrical	Label Breakers/Circuits	All breakers/circuits shall be legibly identified for its specific purpose or use. NEC 408.4
Final Mechanical	Access Ports	Refrigerant circuits access ports shall be fitted with a locking type tamper resistant cap. IMC M 1411.8
Final Mechanical	Provide Manufactures Instructions	Installers shall leave manufactures installation instructions at the equipment. IMC 304.1
Floor Framing	Anchor Bolt Washers	3"x3"x3/16" plate washers are required at all anchor bolts in shear and/or bearing walls. IRC 403.1.6
Floor Framing	Ramp Run Slope	Ramp runs shall not exceed a running slope of 1:12 (8%) and cross slopes of ramp runs shall not be steeper than 1:48 (2.083%). [IBC 1012.2]
Floor Framing	Ramp Clear Width	The clear width of a ramp run shall be 36 inches minimum. [CBC 11012.5.1]
Floor Framing	Ramp Maximum Rise	The rise for any ramp run shall be 30 inches maximum. [IBC 1012.4
Floor Framing	Ramp Landings	Ramps shall have landings at the top and the bottom of each ramp run. [IBC 1012.6]
Floor Framing	Landing Clear Width (Ramps)	The landing clear width for a ramp shall be at least as wide as the widest ramp run leading to the landing. [IBC 1012.6.2]
Floor Framing	Top Landings (Ramps)	The top landing for a ramp shall be 60 inches wide and 60 inches long, minimum. [CBC 11B-405.7.2.1 & 11B-405.7.3]

Floor Framing	Bottom Landings (Ramps)	Bottom landings of ramps shall extend 72 inches minimum in the direction of ramp run. [IBC 1012.6.3]
Floor Framing	Ramp Change in Direction	Ramps that change direction between runs at landings shall have a clear landing 60 inches minimum by 72 inches minimum in the direction of downward travel from the upper ramp run. [IBC 1012.6.4]
Floor Framing	Doors Adjacent to Ramps	Doors, when fully open, shall not reduce the required ramp landing width by more than 3 inches, or to less than 42 inches. [IBC 1012.6.5]
Footing	Footing Depth & Width	Depth and width of footing must be in accordance with Tables R403.1(1 - 3) or Figures R403.1(1) or R403.1.3 as applicable or approved plan OR: SINGLE STORY: 18wX18d, REINFORCED according to Figure R503.1.3, detail #1 or #2 (IRC R403.1.3.3) TWO STORY: 24wX18d, REINFORCED according to Figure R503.1.3, detail #1 or #2 (IRC R403.1.3.3) THREE STORY: SITE SPECIFIC FOUNDATION DESIGN REQUIRED All footings must extend into in-situ/undisturbed soil a minimum of one foot.
Footing	Footing Reinforcement	Footing reinforcement not installed per approved plans or IAW IRC R403.1.3.3
Footing	Clean footings	Excavations shall be clean of all loose debris, trash, leaves, roots, water, ect..IRC 403[ACI 26.5.2.1]
Grading Pre-construction	Setbacks	Foundation encroaches into required setbacks detailed on the approved plans. [IBMC Chapter 19]
Grading Pre-construction	Soils Report Required	Provide geotechnical report and site specific foundation design if alternative to a slab-on-ground with turned down footings for light construction with or without brick veneer: SINGLE STORY: 18wX18d, REINFORCED according to Figure R503.1.3, detail #1 or #2 (IRC R403.1.3.3) TWO STORY: 24wX18d, REINFORCED according to Figure R503.1.3, detail #1 or #2 (IRC R403.1.3.3) THREE STORY: SITE SPECIFIC FOUNDATION DESIGN REQUIRED
Grading Pre-construction	Height Above Finished Grade	Stem wall shall be a minimum 8” top of wall to grade.
Mechanical Rough	Vent Clearances to Combustables	Clearance to combustables: single wall vent 6", double wall vent (B, L and BW) 1" (minimum) IRC 2427.10.5
Mechanical Rough	Gas Appliance Connectors	Gas (appliance) connector shall not pass through a building wall or appliance wall. IRC 1803.3.1
Mechanical Rough	Disconnect	Electrical disconnect within sight and service receptacle within 25' on same level NEC 440.14
Mechanical Rough	Enviromental Air Duct Termination	Dryer, bathroom or kitchen exhaust shall terminate a minimum of 3ft from building opening or property line. IMC 503.1.3 IMC 506.4.2 IMC 1506.3
Mechanical Rough	Enviromental Air Ducts	Enviromental air ducts shall terminate to the exterior of the building with an approved backdraft damper. IMC 504.4
Mechanical Rough	Bathroom Exhaust	Rooms containing bathtubs, showers, spas or water closets shall have mechanical ventilation. IMC 403.3.2.3
Mechanical Rough	Range Hood Exhaust	Vertical clearance above range 30" minimum to combustables. IMC 507.4.2
Mechanical Rough	Kitchen Hood Clearance	Install per manufactures listing. 18" minimum verticle clearance to combustables (typically cabinets), per manufactures installation instructions. IMC 506.3.1.2
Mechanical Rough	Kitchen Hood Ducting	Hood and duct made of metal with smooth interior surfaces. IMC 505.1
Mechanical Rough	Access(Attic)	Mininmum opening for access to attic with equipment shall be 22"x30" or large enough to remove the largest component. IBC 807.1
Mechanical Rough	Access(Crawl Space)	Required access (to service equipment) in a crawl space shall be a minimum 18"x24" IBC 408.4
Mechanical Rough	Access Length(Attic)	Maximum distance from access point to equipment inn the attic shall be 20ft. IMC 306.3
Mechanical Rough	Access Length(Crawl Space)	Access to equipment in a crawl space shall be a maximum 20ft to equipment (unobstructed) with a solid 24" wide floor. IMC 306.4
Mechanical Rough	Access Width(Attic)	Provide solid floor in the attic from the access point to equipment minimum 24 inches wide. IMC 306.3
Mechanical Rough	Service Area	provide a level platform in the attic with 30x30 clear space in front of unit. IMC 306.3
Mechanical Rough	Access Height(Attic)	Minimum attic height 30" at access. IMC 306.3
Mechanical Rough	Access Lighting	Provide a switch controlled light at access point for equipment. IMC 306.4.1
Mechanical Rough	Located in Garage	FAU in garage shall be elevated so that all burners are atleast 18" above the floor. IMC 304.3
Mechanical Rough	Elevated Equipment	Equipment that has a flame, generate spark or has a glowing device shall be elevated atleast 18 inches above floor in garages. IMC 304.3
Mechanical Rough	Secondary Condensate	Secondary condesate to terminate in a conspicuos location. IMC 307.2.3
Mechanical Rough	Listed Wall Furnaces	Listed wall furnaces shall be installed in accordance with their listings and manufactures installation instructions. IMC 909.1
Mechanical Rough	Through 1-hr Wall	Ducts through one hour fire rated wall shall be a minimum 26 gauge. Flexible ducts shall not penetrate fire resistance rated assemblies. IBC 717.7 IBC 717.6.1
Mechanical Rough	Clearance to Earth	Ducts shall be installed with not less than 4" separation to earth. IMC 603.14
Mechanical Rough	Duct Joints	Duct joints shall be made airtight by means of tape, mastics, gasketing or other means. Crimp joints shall lap not less than 1 1/2" and fastened with 3 sheet metal screws. IMC 603.9
Mechanical Rough	Flexible Duct Support	Flexible ducts shall be supported horizontally at not more than 4' intervals. IMC 603.10
Mechanical Rough	Exhaust Termination	Clothes dryer exhaust shall not terminate in a crawl space, attic or other concealed space. IMC 504.4
Mechanical Rough	Backdraft Damper	Clothes dryer exhaust shall terminate outside of the building and shall be equipped with a backdraft damper. IMC 504.4
Mechanical Rough	Screens at Termination	Screens shall not be installed at the clothes dryer exhaust duct termination. IMC 504.4
Mechanical Rough	Fire Extinguishing System	Fire extinguishing system shall be provided for the hood. IFC 904.2.2
Mechanical Rough	Fire system Manual Activation	Fire extinguishing system for kitchen hood requires a manual pull station 42" to 48" above floor and readily accessible in exit path of travel, minimum 10' and maximum 20' from protected appliances. IFC 904.12.1
Plumbing Rough	Plumbing in Concrete	Plumbimg pipes shall not be directly embedded in concrete. Sleeve or wrap pipe as required. IPC 109.4.8
Plumbing Rough	Water Shut-Off valve	Cold water supply for water heater shall have a fullway ball type shut-off valve. IPC 606.1.8

Plumbing Rough	Access	Minimum access to water heater in attic or under floor is 22"x30" IPC 502.3
Plumbing Rough	Access Passageways	Provide an unobstructed passageway a minimum of 24" wide and/or a level working area of 30'x30" in front of the service side of the water heater. IPC 502.3
Plumbing Rough	Protection From Leaking	Where leaking can cause structural damage, a corrosion resistant pan with a minimum 3/4" drain to an approved location shall be placed under the water heater. IPC 504.7
Plumbing Rough	Raised Platform in Garage	Water heater shall be elevated so that the pilot light and controls are atleast 18" above garage floor surface. IRC 2408.2
Plumbing Rough	Disconnect Required	Electric water heaters to have a labeled discoonect in sight. IPC 504.3
Plumbing Rough	T&P Drain required	Temperature pressure relief valve is required. IPC 504.5
Plumbing Rough	Gas Shut Off Valves	Each water heater shall have an independent gas shut off valve. IPC 504.3
Plumbing Rough	Expansion Tank	Expansion tank required when water system is provided with a check valve, backflow preventer or other normally closed device. IMC 1009.1
Plumbing Rough	Vent Termination	termination of type B vent shall be atleast 12" above any portion of flat roof, not within 8' of any vertical surface. IMC 802.5
Plumbing Rough	Minimum Service size	Building water service pipe shall be a minimum of 3/4 inch in diameter.IRC2903.1
Plumbing Rough	Water Pipe Burial Depth	Water piping shall be atleast 12" below grade. IRC 2603.7
Plumbing Rough	Pressure Regulator	Maximum unregulated ater pressure shall be 80psi IRC 2903.1
Plumbing Rough	Water Supply Test	Water lines shall be tested to a working pressure of 50psi for 15 minutes. Plastic piping shall not be tested with air unless allowed by manufacture. IRC 2503.7
Plumbing Rough	Slope of Piping Diameter Less than 4"	Horizontal drainage piping shall be a run in practical alignment and of slope not less than 1/4" per foot or 2%. IRC 3005.3
Plumbing Rough	Vent Termination at Roof	Plumbing vents shall terminate outdoors a minimum of 6" above the roof and atleast 1' from any vertical surface. IRC P3103.1
Plumbing Rough	Horizontal Vents	Plumbing vents shall terminate outdoors a minimum of 6" above the flood rim level of the fixture before offsetting horizontally. IPC 905.3
Plumbing Rough	Underground Gas Line	Buried polyethylene (PE) pipe gas lines shall be 18 inches below finished grade with 14 gauge yellow insulated tracer wire. IRC G2415
Plumbing Rough	Gas Line Pressure Test	Gas lines shall be tested at 10 PSI for a minimum of 15 minutes. IRC G2417
Plumbing Rough	Gas line tracer wire	An electrically continuous corrosion-resistant 14AWG tracer wire shall beburied with the plastic gas pipe.one end shall be brought above ground at building wall or riser IRC G2415
Plumbing Rough	Mixing Valve Required	The control valves in showers, tub/showers, bathtubs,and bidets must be pressure balanced or thermostatic mixing valves(120degrees F Maximum) [IRC P2713.3]
Plumbing Utility	Drinking Fountains	No fewer than two drinking fountains shall be provided. One shall be accessible in accordance with IBC 1109.5.1
Plumbing Utility	Drinking Fountain Spout Height	Drinking fountain spout outlets shall be 36 inches maximum above the finish floor or ground. [IBC 1109.5.1
Pool Bonding	Equipotential Bonding Ring	Must use #8 Solid Copper Conductor. 18-24 inches from the inside wall of pool. Install below final grade 6-8 inches. NEC 680.26
Pool Bonding	Bond Metal Within 5 feet	All exposed fixed metal within 5 feet horizontally and 12 feet above the pool/spa shall be bonded together.
Pool Bonding	Equipotential Bonding	Pool steel shall be bonded to pool light niche, pool equipment and around the perimeter of the pool with a solid #8 AWG copper wire. IRC 4204.2.2.1-2
Pool Reinforcing	Pool Steel	Reinforcing steel for pool, spa and /or special features not per approved plans. IRC 4204.2.2.1
Wall Framing	Anchor Bolts/OTHER Approved Anchors/Anchor Straps	Anchor bolt and/or other approved anchors or anchor straps: size, spacing, length, embedment and / or reinforcement not per approved plans or IRC/IBC (IRC R403.1.6)
Wall Framing	Crawl Space Height and Access	Provide required height for raised foundation, minimum 18" height (Figure R403.1(3)) Provide access IAW R408.4 (18"x24" floor; 16"x24" perimeter)
Wall Framing	Crawl Space Ventilation	Under floor ventilation of 1 Sq. ft. per 150 sq. feet of under-floor space area, unless the ground surface is covered by a Class 1 vapor retarder material. Where a class 1 vapor retarder material is used, the minimum net area of ventiliation openings shall not be less than 1 square foot for each 1,500 square feet of under-floor space. One such ventilating opening shall be within 3' of each corner of the building. (IRC R408) Coverings of Ventilation must be IAW R408.2 Unvented Crawl Spaces authorized IAW R408.3
Wall Framing	Attic Ventilation	Attic ventilation shall be IAW IRC R806.1
Wall Framing	Attic Access	Attic access shall be a minimum of 22"x30" and vertical height of 30" minimum (IRC R807.1)
Wall Framing	Anchor Bolt Washers	A nut and washer shall be tightened on each anchor bolt (if using anchor bolts for framing anchoring rather than anchor straps or other approved anchors (IRC R403.1.6))
Wall Framing	Anchor Bolt Spacing	1/2" diameter anchor bolts spaced a maximum of 6' on center. Bolts shall extend a minimum of 7" into foundation. Bolts shall be located in the middle 3rd of the width of the plate. There shall be a minimum of 2 bolts per plate section with one bolt located not more than 12" or less than 7 bolt diameters from each end of the plate section. (IRC R403.1.6)
Wall Framing	Beam & Headers	Beams / headers are not the correct type and / or size specified on the approved plans or IAW IRC Table R602.7(1)
Wall Framing	Boring & Notching (Engineered Lumber)	Provide information from the Engineer or Record (EOR) confirming approved locations and sizes of boring / notching of engineered products. [IRC R802.7.2 & IBC 2308.8.2.1]
Wall Framing	Boring of Studs (Bearing Wall)	Diameter of a bored hole in a bearing wall stud shall be a maximum of 40% of the stud depth. Hole must be a minimum of 5/8" from edge of stud. [IRC R602.6 & IBC 2308.5.9-10]

Wall Framing	Notching of Studs (Bearing Wall)	Notch in a bearing wall stud shall be a maximum of 25% of the stud depth. [IRC R602.6 & IBC 2308.5.9-10]
Wall Framing	Boring of Studs (Non-Bearing Wall)	Diameter of a bored hole in a non-bearing wall stud shall be a maximum of 60% of the stud depth. Hole must be a minimum of 5/8" from edge of stud. [IRC R602.6 & IBC 2308.5.9-10]
Wall Framing	Notching of Studs (Bearing Wall)	Notch in a non-bearing wall stud shall be a maximum of 40% of the stud depth. [IRC R602.6 & 2308.5.9-10]
Wall Framing	Boring & Notching Top Plate	Boring and notching of the top plate exceeding 50% of its width, a galvanized structural tie (1 1/2" wide with 1 1/2" lap to either side of top plate) shall be fastened across the opening in the top plate. [IRC R602.6.1]
Wall Framing	Notching Joists	Notches in joists shall not exceed 1/6 the depth of the member, shall not be longer than 1/3 the depth of the member, and not located in the middle third of the span. [IRC R502.8]
Wall Framing	Boring Joists	Boring in joists shall not exceed 1/3 the depth of the member and at least 2" from the bottom of the member or any other hole. [IRC R502.8]
Wall Framing	Openings in Floors, Ceilings & Roofs	Openings in floors, ceilings and roofs over 4' wide require double joists and headers. Approved hangers required when header joists exceed 6'. IRC 802.9 502.10
Wall Framing	Fall Protection (Windows)	Where a window opening is less than 24" above the finished floor and greater than 72" above grade, the window shall comply with IRC R312.2.1.
Wall Framing	Fall Protection (Windows)	Where a window opening is less than 24" above the finished floor and greater than 72" above grade, the window shall comply with IRC R312.2.1.
Wall Framing	Stair Risers (Residential)	Stair riser height shall not exceed 7 3/4" and variation in height between risers shall not be more than 3/8". [IRC R311.7.5.1 & IBC Chapter 10]
Wall Framing	Stair Risers (Commercial)	Stair riser heights shall be 7" maximum and 4" minimum with a tolerance between risers of 3/8". [IBC 1011.5]
Wall Framing	Stair Treads	Depth of stairway treads shall not be less than 10" when a nosing is present, 11" without nosing. Differences in depths of treads shall not exceed 3/8". [IRC R311.7.5.2 & IBC 1011.5.2]
Wall Framing	Stairway Landings (Residential)	Landing required at the top and bottom of each stairway. Stairway landing shall not be less than the width of the door or 48" in the direction of travel. [IBC 1011.6]
Wall Framing	Stairway Landings (Commerical)	Landing required at the top and bottom of each stairway. Stairway landing shall not be less than 36" in the direction of travel. [IRC R311.7.6]
Wall Framing	Ceiling Height (Residential)	Ceiling height for habitable spaces shall be not less than 7'. Bathrooms and laundry rooms can be 6' 8". [IRC R305]
Wall Framing	Ceiling Height (Commercial)	Ceiling height for habitable spaces shall be not less than 7' 6". Bathrooms and laundry rooms can be 7". [IBC 1207.2]
Wall Framing	Hallway Width (Residential)	The width of hallways shall not be less than 3'. [IRC R311.6]
Wall Framing	Corridor Width	Corridors shall have a minimum width as specified in IBC Table 1020.2
Wall Framing	Fireblocking Required	Fireblocking of an approved material shall be provided in accordance with IBC 718.1
Wall Framing	Draftstopping Required	Draftstopping with an approved material shall be provided to limit a concealed area to 1,000 Sq. Ft. in accordance with IBC 718.3.3]
Wall Framing	Fire Wall Roof Termination	Fire walls shall terminate not less than 30" above a roof. **Exceptions** [IBC 706.6]
Wall Framing	Eaves with Fire Separation Less than 5'	Eaves less than 5 feet from fire separation distance must be non-combustible construction, one-hour fire rated construction or fire treated lumber. [IBC 705.2.3]
Wall Framing	Field Modified Trusses	Trusses shall not to be field modified and must be installed per manufacturer's specifications. [IBC 2303.4.5]
Wall Framing	Crawl Space Ventilation	Under floor ventilation of 1sq.ft per 150sq. Ft. shall be provided to under floor area. IRC 408.1.1
Wall Framing	Attic Ventilation	Attic ventilation of 1sq. Ft. per 150sq ft. shall be provided to the attic space. IRC R806.1
Wall Framing	Attic Access	Attic access shall be a minimum or 20"x30" with a clear height of 30" or large enough to remove equipment. IRC 807.1
Wall Framing	Green Board Required	Water Resistant Gypsum (Greenboard) shall not be used in the following: [IBC 2509.3] over a vapor retarder in shower or tub compartment, in areas subject to continuous high humidity or direct exposure to water, and in showers or bath tub enclosures
Wall Framing	Fire Assembly Penetrations	Penetrations through Fire-Rated Assemblies shall be protected by an approved listed penetration Fire-Stop System and have an F-Rating of not less than the required rating of the wall penetrated. (Fire Caulking, and in some cases mineral wool backing) [IBC 714.3.1.2]
Wall Framing	Fastener Penetration - Wood	Drywall screws shall penetrate into wood framing member a minimum of 5/8" [IRC R702.3.5.1]
Wall Framing	Fastener Penetration - Steel	Drywall screws shall penetrate into steel framing member a minimum of 3/8" [IRC R702.3.5.1]
Wall Framing	Handrail Height	Handrails shall be 34 inches minimum to 38 inches maximum vertically above walking surfaces, stair nosings, and ramp surfaces and shall be at a consistent height. [IBC 1014.2]
Wall Framing	Handrail Clearance	Clearance between handrail gripping surfaces and adjacent surfaces shall be 1½ inches minimum. [IBC 1014.3.1]
Wall Framing	Handrail Gripping Surface (Circular)	Handrail gripping surfaces with a circular cross section shall have an outside diameter of 1¼ inches minimum and 2 inches maximum. [IBC 1014.3.1]
Wall Framing	Handrail Gripping Surface (Non-Circular)	Handrail gripping surfaces with a non-circular cross section shall have a perimeter dimension of 4 inches minimum and 6¼ inches maximum, and a cross-section dimension of 2¼ inches maximum. [IBC 1014.3.1]
Wall Framing	Handrails at Ramps	Ramp handrails shall extend horizontally above the landing for 12 inches minimum beyond the top and bottom of ramp runs & shall have a return. [IBC 1014.6]
Wall Framing	Handrails at Top of Stairs	At the top of a stair flight, handrails shall extend horizontally above the landing for 12 inches minimum beginning directly above the first riser nosing & shall have a return. [IBC 1014.6]

Wall Framing	Handrails at Bottom of Stairs	At the bottom of a stair flight, handrails shall extend the length of one tread depth plus 12 inches & shall have a return. [IBC 1014.6