

# City of Boerne



## Building Permit Handbook

Revised May 2010

**CITY OF BOERNE  
BUILDING PERMIT HANDBOOK**

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## **CODE ENFORCEMENT OFFICE INFORMATION**

### **Code Enforcement Office Hours**

Monday through Friday  
8:00 a.m. – 5:00 p.m.

Building inspectors/Code Enforcement Officer are out of the office during on-site inspection hours (see below). Please call the office if you wish to leave a message for them via the permit clerk or their voice mail. If you wish to schedule a meeting with them, please call ahead to reserve a specific time frame.

### **On-site inspection hours:**

Monday through Friday  
9:00 a.m. – 11:00 a.m.  
2:00 p.m. – 4:00 p.m.  
*Or by special appointment*

### **Code Enforcement Phone & FAX Number:**

Phone: 830-249-9511  
Fax : 830-249-7202  
**Direct Dial Line: 830-248-1529**

### **Code Enforcement Staff**

Chief Building Inspector – Jesse Aguirre X1152  
Building Inspector – Sean Skaggs X1153

Code Enforcement Officer – Betty Kwasneski X1101  
Code Enforcement Clerk – Becky Milliner X1107

## **BOERNE BUILDING CODES**

International Building Code – 2006 Edition

International Residential Code – 2006 Edition

International Plumbing Code – 2006 Edition

International Mechanical Code – 2006 Edition

International Fire Code – 2006 Edition

International Fuel & Gas Code – 2006 Edition

National Electrical Code – 2005 Edition

## **REGISTRATION & LICENSING INFORMATION**

The City of Boerne does not issue city licenses to contractors. A license issued by the State of Texas is required for registration of all subcontractors.

**FEE:** The City of Boerne does not charge a registration fee.

**First-time registrations are not accepted online, via fax or by mail and first-time permit applications must be pulled by the master license holder. Exception: Master plumbers may register online, via fax or mail per changes in state plumbing code on 9/1/09.**

**REGISTRATION UPDATES:** Registration updates are accepted by mail or fax as long as the copies of the updated I.D.'s are legible.

**MULTIPLE REGISTRATIONS:** If you are licensed in more than one field and would like duo registration with us, please bring both cards with you to our office.

### **WHO MUST REGISTER?**

1. All general contractors.
2. All master electricians, plumbers and HVAC contractors. For contractors holding master licenses, the master must come in person to register with our office and present the appropriate identification, sign and date the registration form. If the master wishes to have one of his employees pull permits for him under his license, then he must fill out the authorized personnel section at the bottom of the registration form and sign and date it. Master plumbers – read exception clause at top of this page, third paragraph.

**The state of Texas requires that all state-licensed persons carry their licensing information on them at all times and are required to produce their license for the building inspectors upon request. Failure to do so will result in the job being shut down until such time as everyone on the job site can produce current licensing information.**

## **WHAT DOCUMENTS ARE NEEDED TO REGISTER?**

1. **General Contractors**  
Valid TX driver's license.
2. **Master Electricians**  
Valid TX driver's license  
Master electrician license  
Electrical contractor certificate  
Certificate of liability insurance made out to the City of Boerne, 402 E. Blanco,  
Boerne, TX 78006.
3. **Master Plumbers**  
Valid TX driver's license  
Master plumbing license  
Liability insurance will be verified with TX State Plumbing Board at time of  
registration per 9/1/09 changes in state requirements
4. **Master Mechanical Contractors**  
Valid TX driver's license  
Master air conditioning and refrigeration license  
Certificate of liability insurance made out to the City of Boerne, 402 E. Blanco,  
Boerne, TX 78006.
5. **Lawn sprinkler, Backflow Tester, Fire Sprinkler/Fire alarm contractors**  
Valid TX driver's license  
Landscape irrigator's card  
Backflow prevention assembly tester card  
Fire sprinkler or Fire alarm RME card.

No certificate of liability insurance is required at this time for general  
contractors, lawn irrigators, backflow testers or fire sprinkler/alarm  
contractors.

## **PERMIT APPLICATION REQUIREMENTS**

### **What work requires permits?**

Individual permits are required for all structural work other than minor repairs. This includes work involving new and remodel (finish out) for residential & commercial buildings, decks, roofing, sheds, fences, swimming pools, plumbing, electrical, mechanical and all signs and banners except for garage sale signs. If you are in doubt as to whether or not a permit is required, please contact the Code Enforcement Office at City Hall, (830) 248-1529.

## **REQUIREMENTS FOR NEW COMMERCIAL BUILDINGS**

### **ADA**

All commercial remodels and new commercial construction must meet ADA requirements. To find out what the ADA requirements are, please call the ADA at 1-877-278-0999. They conduct their own inspections. (See #2 below).

### **1. Zoning:**

See Laura Talley in Planning & Zoning to establish if where you wish to build is zoned appropriately for your commercial project and to get your entry corridor information taken care of. If the site you are planning on building on is in the flood zone, please consult with them as they may need to issue you a development permit. Planning & Zoning is located in a small stone building just outside the back door of the main building at City Hall.

### **2. Plan submittal:**

A complete listing of what is required for commercial plan submittal can be found in the *Commercial Building Information/Checklist*, a seven-page pamphlet provided for your convenience by our office. The checklist contains plan review requirements, asbestos removal and ADA information, online information, our office information as well as inspection information, landscaping, illumination and parking facility requirements. It can be picked up from our office when registering with us. Plans must have a complete street address including suite number. Lot & block are not acceptable. Street addresses are issued through Chief Gary Miller, Boerne PD. He can be contacted at 830-249-8645, ext. 1200. All requirements on the checklist need to be met before the City will issue a certificate of occupancy

### **3. Permit application/plan check fee:**

Square footage of the project must be submitted for calculation of new project fees. The application must be filled out completely, signed and dated. If a contractor is pending due to the job being out to bid, then the GC information must be called in to our office and they must come in and register with us prior to the building permit being issued. Plan check fee amount for plan review is due when the permit application and plans are submitted and is non-refundable. Please call the permit clerk for verification of plan check fee amounts if you plan on bringing in a pre-made check.

### **4. Plan review time:**

Commercial project plan review time varies with the size and complexity of the project. Plan review begins with the Public Works department, is then forwarded on to the Fire Marshall's office before it is reviewed by the Code Enforcement Office. The larger the job, the more time will be required to complete your plan review. When projects have been completely reviewed and permits are ready to be released, you will be called by our office.

### **5. Pre-construction meeting:**

Once your plans are finished being reviewed and our office has called you with this information, you will need to call the Public Works Department to set up a pre-construction meeting.

### **6. Impact Fees:**

When the pre-construction meeting is finished, you will need to meet with Sherry Sandall in Public Works to do the paperwork for any impact fees that are due. Public Works then notifies our office when you have completed their impact fee paperwork.

### **7. Permit Issuance:**

After impact fees have been paid, our office will issue you the building permit. You will receive a copy of the permit with a "PAID" stamp on it which needs to be posted at the jobsite along with the copy of our stamped plans. After the building permit has been paid for, the subcontractors on the job can come register and pull their permits. A copy of each permit issued is required to be posted at the jobsite at all times.

# CITY OF BOERNE INSPECTION GUIDELINES

Technical information and inspections may be requested by calling our office (830) 248-1529, Monday through Friday at the hours listed in the Code Enforcement Office Information sheet on page 3.

The City reserves a 24-hour notice on all inspections; inspections will be made as soon as practicable. Inspection times are given as guides only. Due to the possibility of on-site job problems that can and do occur while our inspectors are in the field conducting inspections, assigned inspection times can vary. Please check with the permit clerk if a problem occurs with your assigned time and if a timing conflict is occurring, we will try to re-schedule your inspection for another date or time.

**This handbook is meant to assist you in preparing for inspections. It is not a comprehensive list. It was prepared for your convenience and as a helpful guide for some of the more frequently cited problem areas that our building inspectors observe.**

**JOB ADDRESSES:** The job address must be posted in a prominent location and be of adequate size so as to be easily read from the street. If the address is not posted, no inspection will be made and a re-inspection fee will be assessed and is to be paid before the next inspection.

## **Building/Framing**

1. Setbacks. Be sure to check the Boerne Zoning Ordinance online for proper front, rear and side yard setbacks.
2. Easements. Ensure that buildings are clear of all easements and that fences across easements are fitted with gates or removable panels.
3. Roof decks. Spacer clips should be used when installing roof decking to prevent buckling.
4. Slab site. All topsoil and organic matter shall be stripped from the slab site.
5. Bottom plates. These must be either treated lumber or be installed with felt paper beneath them.

6. Headers. All headers over openings 6 feet or more shall be supported by double cripples and shall be of properly-sized 2" lumber on edge.
7. Fur downs. All fur-downs in residences shall be fire-blocked.
8. Collar ties. These must be installed on every third pair of rafters and must use 6" material.
9. Handrails. The gripping surfaces of handrails shall be continuous without interruption by newel posts or other obstructions.
10. Landings. A landing shall be provided on the exterior side of all egress door openings. Landing width shall be not less than the width of the door it serves and the depth shall be not less than 36 inches. The landing may be one step lower than the inside floor level but not more than 7 inches lower.
11. Vapor retarders. A vapor retarder under the slab must be of 6 mil minimum polyethylene with joints lapped 6 inches and sealed.
12. Fasteners. Foundation bolts are the only fasteners approved in the code book and must be used unless another method is approved by this office PRIOR to construction of the slab. Anchor bolts are required no more than 6 feet apart.
13. Joists. Care must be taken when notching or drilling holes in joists.
14. Windows. Windows in bedrooms for emergency egress must have a minimum clear opening height of 24 inches and a minimum clear opening width of 20 inches. The net clear opening area shall be at least five square feet. The sill height shall be no greater than 44 inches from the floor. Second story windows shall be at least 5.7 square feet.
15. Hangers. Every nail hole in joist hangers must have a nail installed per manufacturer's requirements. Roofing nails are not authorized for this.

16. Moisture barriers. Wood behind brick and rock veneer shall be protected with a moisture barrier.
17. Stairs. Treads and risers of stairs shall be proportioned so that the sum of two risers and one tread is not less than 24 inches and not more than 25 inches. The height of a riser shall not exceed  $7\frac{3}{4}$  inches. Treads shall not be less than 9 inches.
18. Bracing. 1 x 4 bracing must be let into top and bottom plates and be not more than  $60^\circ$  and not less than  $45^\circ$  from the vertical. Bracing must occur every 25 feet. Other methods are accepted with PRIOR approval.
19. Span tables. Joist and rafter span tables must be adhered to.
20. Roofs. Required purlins shall be 2" lumber at least as large as the rafter supported and shall be braced at least every 6 feet. No roof braces shall be connected to the ceiling joists. Ridges, hips and valleys shall be at least as large as the end cut of the rafter attached to it. No scabs allowed.
21. Ceilings/Walls. All furred ceilings and walls must be sealed (draftstopped) with sheetrock or plywood so as to isolate the stud cavities from the attic or floor/ceiling cavities. All penetrations of the draftstopps must be tightly sealed.
22. Top plates. Top plates are to be continuous throughout. If severed for arched window, gable must be diaphragmed outside with  $\frac{1}{2}$ " plywood. Plates are to be strapped to king stud or header. When plate height change occurs, block between continuing 2 stud spaces and strap all together with 4' structural strap. Two top plates are required on all walls.
23. Chimneys. Chimney is to extend 2' minimum above any part of the building within 10' (pitch x 10" plus 24" equals minimum height of short side above roof).

## **Plumbing**

1. **Licensing.** Any person doing plumbing work inside the city limits MUST be a licensed plumber. A journeyman must be on the job any time plumbing work is being performed. Licenses should be carried on the person at all times for an inspector to see at their request.
2. **Hose bibs.** All hose bibs shall be fitted with approved backflow preventers.
3. **Relief valves.** Temperature and pressure relief valves shall be piped full size with fall to the outside of the building and elbowed down to within 6 – 12 inches of the finished grade. Materials should be capable of handling temperature rating of the relief valve; i.e. copper or galvanized steel.
4. **Water systems.** Only lead-free solder may be used for potable water systems.
5. **Drain vents.** All horizontal drain vents shall be at least 6 inches above the flood rim of the fixture they serve.
6. **Piping protection.** Where cutting, notching, or boring occurs within 1½ inches of the face of wooden joists, rafters, or studs, a protective steel plate 1/16<sup>th</sup> inch thick shall be used to protect the piping.
7. **Water temperature.** The temperature of mixed water to individual showers and shower/bath combinations in all buildings shall be controlled by a scald preventative valve of the pressure balancing or thermostatic or combination mixing valve type. The maximum mixed water outlet temperature shall be set at 120° F.
8. **Sewer.** No building sewer shall be less than 4 inches in size.

9. Inlet distances. The distance from a vertical standpipe inlet for a washing machine drain to the trap weir shall be a minimum of 24 inches with the vertical stand pipe inlet a minimum of 34 inches above the finished floor. (This means the trap for a washing machine cannot be in the slab anymore).
10. Gas. Every building supplied with gas shall have a cutoff outside the building, accessible to the customer.
11. Slopes. Pipes smaller than 3 inches shall have a minimum slope of  $\frac{1}{4}$  inch per foot. Pipes 3 inches and larger shall have a minimum slope of  $\frac{1}{8}$  inch per foot. You CAN use a greater slope and not always hold the bare minimum.
12. Underground piping. The minimum pipe size for DWV underground or under a slab shall be 2 inches. Waterlines under slabs must be type "L" copper or better.
13. Water heaters. Water heater placement is not allowed above ceilings or in attics. Safety pans under the water heater shall not be less than  $1\frac{1}{2}$  inches deep and the drain line shall not be less than 1 inch.
14. Waste piping. Soil or waste pipe (building drain) passing through or under a footing of a foundation wall shall be sleeved with a pipe two pipe sizes larger than the pipe passing through.
15. Tests. Water test on ALL DWV (including second floor) and pressure test on ALL water distribution piping (100 psi.)
16. Sleeving. Minimum thickness for sleeving of copper in slab is .025
17. Traps. All traps are to be above the slab with the exception of tubs, showers and floor drains only. All floors are to be "stack vented" with one main vent of 3" minimum.
18. Water service line. Sch 40 PVC or copper lines for the water service line.

## **Electrical**

1. Licensing. Master and Journeyman must be licensed by the state. At least a journeyman must be on the job whenever electrical work is being done.
2. Wiring. All wiring in buildings from weather head forward must be copper. All commercial buildings regardless of occupancy must be wired in conduit. City Amendments to the NEC. Range wire shall be at least 10/3 or SE 6/2 and terminate in a box. Oven wire shall be at least 8/3 and in a box.
3. Feeders. All feeders to interior panels will contain a separate, properly sized ground conductor.
4. Groundings. All grounding systems will be bonded to foundation steel. In addition to a properly sized grounding rod. The proper method to ground the building steel is to use at least a #6 wire and clamp it to the BOTTOM beam steel.
5. Disconnects. All buildings must have an outside disconnect on the building. All electrical appliances to include water heaters shall have a means of disconnect at the appliance location. The disconnect on the line side of a motor controller which is not in sight of the motor will be required to be capable of being "individually" locked open. A lock on the cover of the panel board does not qualify.
6. GFCI's. GFCI's must be installed on all outside outlets, outlets installed in garages, all bathroom outlets and all outlets serving kitchen counter top surfaces. All outlets in the garage (except a dedicated circuit for a freezer), outside within 6 feet of the ground and in bathrooms shall be GFCI protected. Each countertop space of 12" or more shall have a GFCI protected outlet. Each 24" of counter space shall be served a GFCI protected outlet. A GFCI is required for the receptacle for laundry equipment in the garage unless it is a single contact device.

7. Receptacles. Receptacles in rooms shall be installed so that no point along the floor line in any wall space is more than 6 feet measured horizontally from any outlet including freestanding bar-type counters. Any wall space 2 feet or greater shall also have an outlet. **Kitchen receptacles** for the counter tops shall be located so that no point along the wall line is more than 24 inches measured horizontally from any outlet. One receptacle outlet is required for each peninsular and island counter top and located within 6" of the top when located on the side. Four-wire grounding type receptacles and flexible cords are now required for connection of ranges and dryers. **Outdoor receptacles** are no longer permitted to be supplied from the kitchen small appliance branch circuits. **Bathroom** receptacle outlets shall be 20-amp and shall have NO lights or other outlets on the circuit. **Isolated ground receptacles** shall be identified by an orange triangle on the face, NOT just overall orange color. They must also be installed in non-metallic boxes with non-metallic face plates. **Receptacles installed in wet locations**, not just outdoors, must be weatherproof, the integrity of which is not affected when the attachment plug cap is inserted. A receptacle shall NOT be installed within a bathtub or shower space.
8. Working space. Working space in front of a panel board must be a minimum of 3 feet. Working space width must be a minimum of 30 inches. This space must be clear all the way to the floor.
9. Over current devices. These devices shall be readily accessible and shall not be located in areas such as clothes closets or bathrooms.
10. Branch circuits. The two kitchen small appliance branch circuits are for counter tops, NOT appliances. Garbage disposal, vent-a-hoods, dishwashers, etc. are NOT allowed on these circuits.
11. Service mast. ONLY power service-drop connectors shall be permitted to be attached to the service mast-NO telephone, CATV, etc.
12. Piping. ENT is prohibited where exposed to direct rays of the sun, unless identified as sunlight resistant.

13. Circuits. Dishwasher and disposal shall be on separate 20 AMP circuits (not included on small appliance circuits). Clothes dryer circuits are to be at least 10/3.
14. Smoke detectors. These are to be in each bedroom, hallway serving and living area. All are to be wired in series.

**\*\*\*\*\* The City of Boerne Utilities now requires that any utility provided by the City to a customer OUTSIDE the city limits MUST obtain permits and comply with city building codes.**

### **Mechanical**

1. Licensing. All mechanical contractors must be licensed by the State of Texas.
2. Attic. A 24-inch wide walkway is required to any equipment installed in the attic. Unit must not be located more than 20 feet from the attic access. Minimum opening to the attic shall be 22" x 36" - 20' max from opening to the unit. (See #4 for attic lighting).
3. Auxiliary drain pans. These shall be installed under all evaporator coils or units containing evaporator coils and the pans shall have a minimum depth of 1½ inches and be not less than 3 inches larger than the unit or coil dimensions in width and depth. Emergency condensate line is to terminate over a window.
4. Light source. A minimum of a 100-watt light source must be located within 10 feet of the equipment. For attic installation, the light source shall be switched at the point of entry to the attic access. For attic units, a light must be provided at the unit and an outlet within 20 feet for service work.
5. Primary condensate lines. All primary condensate lines must go to the outside and terminate in a dry well unless another method is approved by the Building Official.

## MINIMUM FOUNDATION REQUIREMENTS

### Piers

1. All piers shall be 8 inches in diameter (minimum) and constructed of 2500 PSI (minimum) concrete.
2. All piers shall be **12 inches** (minimum) into **undisturbed** soil.
3. All piers shall have a minimum of three (3) pieces of #3 (minimum) re-bar from top to bottom.
4. All perimeter piers shall be equipped with tie down straps or equivalent.

### Slabs (Residential)

1. All topsoil and organic matter shall be stripped from the slab site.
2. All slabs shall be of 2500 PSI (minimum) concrete and provide 6" (minimum) of select fill under the slab.
3. All perimeter beams shall be 10" x 24" with two (2) #5 bars on top, two (2) #6 bars on the bottom, #3 stirrups 3-feet on center, four (4) #6 corner bars and penetrate **12 inches** into **undisturbed** soil.
4. All interior beams shall be 10" x 18" (minimum) and have four (4) #5 re-bars with two corner bars at each intersection, top and bottom.
5. Slab thickness shall be a minimum of 4 inches and have 6 mil poly moisture barrier lapped and taped throughout.
6. The distance from beam to beam shall not exceed 15 feet.
7. All slab steel shall be #3 or greater, spaced 12 inches on center each way and supported to center steel in slab.

8. All beam steel shall be free from touching earth by 2 inches (minimum).
9. All slab foundations must be inspected and approved by city inspectors before pouring, engineered or not. All steel in slabs shall be bonded.
10. Engineered slabs will be acceptable with original signature and seal on each plan. A letter from the engineer is needed stating that the steel conforms to plan and approval given to the placement of concrete.
11. Special slabs for outbuilding, etc. must be approved by the Building Department.

### **Post-Tensioned Slabs**

All post-tensioned slabs shall be engineered and that engineer shall be on the sight for inspection of all phases of work. Upon completion of the slab, engineer shall furnish the City of Boerne a letter accepting all responsibility for any slab failure. No further work will be allowed until this letter has been received by the city.

## **INFORMATION TO BE PROVIDED ON RESIDENTIAL PLANS**

**NOTE: Two complete sets of plans are required.**

1. Site Plan
2. Foundation Plan
3. Elevations
4. Framing Plan (showing ceiling joists, floor joists, rafters, the direction they span, spacing, size and grade of lumber to be used.)
5. Electrical Plan (showing location of outlets, switches, lights, breaker panel, and GFCI's. These must comply with NEC requirements.)
6. Typical wall section for this house.
7. Height of guardrail and spacing for intermediate rails must be shown for any porch or balcony more than 30" above grade.
8. Width of fireplace hearth, in front of fireplace and to the side of the fireplace.
9. Tile roofs require engineered plans included.

### **Boards and/or Commissions**

1. **PLANNING AND ZONING COMMISSION:** Meets the first Monday of the month. Recommends a comprehensive plan for the development of the City, recommends amendments to the zoning maps and the text of the Zoning Ordinance, and conducts studies and makes recommendations on other matters relating to the planning and development of the City. Rules on subdivision plats and replats. Various fees involved.
2. **HISTORIC LANDMARK COMMISSION:** Meets on the first Tuesday of every month. Requests for Building Permits and Certificate of Appropriateness for work done in the Historic District. No fees involved.
3. **ZONING BOARD OF ADJUSTMENT AND APPEALS:** Meets on the 3<sup>rd</sup> Wednesday of the month when necessary. Handles requests for variances to the Zoning Ordinance (fee required) and the building codes (fee required).

### **Key Development References:**

Subdivision Ordinance -- City Secretary, \$.10/page  
Zoning Ordinance -- Office of Planning, \$.10/page  
Sign Ordinance -- Office of Planning, \$.10/page