



## Parkville Residential Construction Guidelines

The following guidelines are provided to assist property owners, contractors and design professionals with the orderly construction of residential projects within the provisions of the adopted Parkville Building Codes, Zoning Ordinances and other City Ordinances. Please read them carefully and understand that they do not include all of the code requirements, but are summarized for this guideline.

### Current Adopted Codes

The Codes currently adopted by the City of Parkville are as follows:

- 2012 International Residential Code (IRC) with all Appendixes listed
- 2012 International Building Code (IBC) with all Appendixes listed
- 2012 International Plumbing Code (IPC)
- 2012 International Mechanical Code (IMC)
- 2012 International Fuel Gas Code (IFGC)
- 2012 International Fire Code (IFC)
- 2011 National Electrical Code (NEC)
- 2009 ANSI 117 of the Americans with Disability Act
- National Pollutants Discharge Elimination System (NPDESII)

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## Section One

# Building Permits and Plan Review

## Building Permits

The following information is required to obtain a Building Permit:

- A completed Building Permit application.
- Two (2) pre-construction staked plot plans, sealed by a Missouri registered land surveyor. The plot plan must show the proposed building, as staked, with setbacks from property lines, easements, platted building lines and siltation control measures indicated. Please refer to the plot plan checklist in this section for all other requirements.
- Platte County Regional Sewer District permits (where appropriate).
- Two (2) full sets of building plans sealed by a Missouri registered Architect or Engineer. Plans must show details as described in the attached minimum plan information for one and two family dwellings.
- The builder and subcontractors must have a current City of Parkville occupational license. Electrical and plumbing contractors must show proof of a masters license, proof of a passing score on an Experior test or furnish a copy of a license from a municipality in the metro area.
- If the structure is to be built in a neighborhood that is regulated by an architectural review board, that board prior to submittal to the City shall approve the plans.

The review of residential plans will take three (3) to five (5) working days.

Permit fees are based upon the valuation of work, labor and material. See Section 18 for permit fee schedule.

Addresses will be given out at permit issuance.

Duration of permit: Every permit issued shall expire one year from date of issuance. One six month extension may be granted by the building official if the project is not in violation of any other city codes or ordinances.

## Minimum Building Plan Information For One and Two Family Dwellings

The following information is required to be shown on plans submitted for permit.

## General

- Plans shall be 18" x 24" for one and two family dwellings: 11" x 24" for additions and alterations.
- All floor plans shall be a minimum of 1/4" scale and elevations a minimum of 1/8" scale.
- A minimum of two (2) full sets of plans will be required; one will be returned, and one will be retained in the Community Development Department. It will be the builder's responsibility to have the approved copy on the site for utilization during the inspection.
- A registered design professional licensed in the state of Missouri shall stamp both plans with a wet seal. In lieu of sealed plans, the plans can be accompanied by a sealed affidavit from a registered design professional licensed in the state of Missouri indicating his/her review and compliance.
- Permits will continue to be available on an "over the counter" basis provided the information required in this document is submitted.
- If any changes or deviations from the plans are made during construction, the contractor shall notify the City of Parkville, Community Development Department. Changes may require revised drawings or calculations.

## Foundation Plan

This is a scale drawing of proposed building's foundation including the following information:

- A plan view of the building foundation system.
- Required anchor bolts and any special hold-down anchor locations and types.
- Show or indicate by note that all footings meet, or exceed, a minimum frost depth of 36".
- Unless indicated on plans, assumed allowable soil-bearing values will be 2000 psf.
- The footing dimensions and footing reinforcement details.
- Indicate foundation wall height, thickness and required reinforcement.
- Show or indicate by note, basement slab thickness and reinforcement.

## Floor Plan

These are scale drawings of the proposed building's floors including the following features/information:

- A plan view of each floor of the building, including the basement.
- Provide dimensions for each room and architectural features (hallways, stairs, etc.).
- Total square footage of each floor level and basement area.
- Note on plans the use for each room (including basement).
- Show size and spacing of proposed floor and ceiling framing members, provide grade and species of lumber, or indicate minimum allowable extreme fiber stress (Fb.) and modulus of elasticity (E) to be used for framing members. Provide dimensions and/or specifications for other types of structural elements used (steel framing, LVL's, gluelams, etc.). Framing information may be shown on floor plans or on separate framing plan.
- Show types of fasteners, such as bolts, for fletched beams or beams using multiple 2x lumber.
- If pre-engineered wood trusses are used in floor framing, provide truss drawings, which identify member sizes to be used. Wood trusses shall be designed in accordance with approved engineering practice.

- For a structural reinforced concrete slab over a usable area, such as a garage floor located over storage area or basement floors on more than 24" of gravel back-fill, submit sealed engineered details and calculations.

### Roof Plan

This is a scale drawing of the proposed building's roof including the following information:

- A note that the roof is designed for 20-psf-roof snow load as a minimum.
- Show purlins, hips and valley bracing; bearing walls, and point loads.
- Type of roof covering used.
- Show size and spacing of proposed roof framing members, provide grade and species of lumber or indicate minimum FB and E to be used for framing members. Provide dimensions and/or specifications for other types of structural elements used (steel framing, LVL's, gluelams, etc.).

### Details and Notes

These are drawings of portions of the building showing greater detail for specific areas. Notes are added to drawings and details clarifying how building code requirements are met in certain instances.

Details and notes are to address the following information:

- Windows: note where safety glazing is to be installed: size, location, and type of windows used to satisfy bedroom egress requirements.
- Smoke detectors and locations.
- Stairs: note rise, run, head clearance and width; provide details for special stairs e.g., spiral and winders.
- Garage separations: provide detail or note of proposed construction between attached garage and living space in the dwelling. No openings are allowed between bedrooms and garage.

### Structural Details

- Provide sufficient details and/or sections to show the transfer of roof, ceiling, and floor loads through the various structural elements in the building. Identify all load-bearing walls.
- Provide sufficient details to clearly demonstrate the structural adequacy in such situations as offset bearing walls, cantilevered beams, vaulted ceilings, stairways and fireplace bays.
- Note on plans the size of all beams, headers and columns used.
- Required wall bracing construction details and locations.

### Energy Conservation

Note type and thickness of wall, crawl spaces and attic insulation to be used; include R-values for each.

## Minimum Plot Plan Information

- Two (2) plot plans stamped by a Missouri registered land surveyor.
- Plat number or legal description, if not platted.
- Lot number.
- 5' contours – existing and proposed.
- Silt control measures indicated – National Pollutant Discharge Emissions Standard requirement (NPDES II).
- Show temporary gravel drive  $\frac{3}{4}$ " rock minimum – NPDES II requirement.
- Base flood elevation (where appropriate).
- Basement floor elevation.
- Top of foundation wall elevation.
- First floor elevation.
- Elevation of sanitary sewer line at stub.
- Building setback lines.



## Section Two

# Storm water and Sediment Erosion Control

### Controlling Building Site Erosion and Sedimentation

The City of Parkville requires effective erosion control measures be in place prior to footing inspection. The Department of Community Development will not pass any footing where erosion control measures are not in place.

All soil and stormwater runoff facilities and measures shall be maintained in accordance with Parkville codes and ordinances. No inspections will be performed unless effective erosion controls are in place. Please read the following and see attached sample details of effective erosion control measures.

#### Evaluate the site

- The best time to provide for adequate lot drainage is before construction begins; with proper planning, most drainage problems can be avoided.

#### Identify problem areas

- Identify the areas where sediment-laden runoff could leave the construction site.

#### Select perimeter controls

- Select perimeter controls to minimize the potential for off-site sedimentation, it is important those perimeter controls are in place before construction begins. Acceptable practices are vegetation, silt fencing, gravel drives, and run off protection.

#### Install perimeter erosion and sediment controls

- Use silt fence along perimeter of the lots down-slope side(s) to trap sediment.
- Install gravel drives and restrict all lot access to this drive to prevent vehicles from tracking mud onto roadways.
- Protect storm sewer inlets by using stone filled geotextile bags.

#### Maintenance

- All soil and run-off control facilities and measures shall be maintained for the duration of the project.

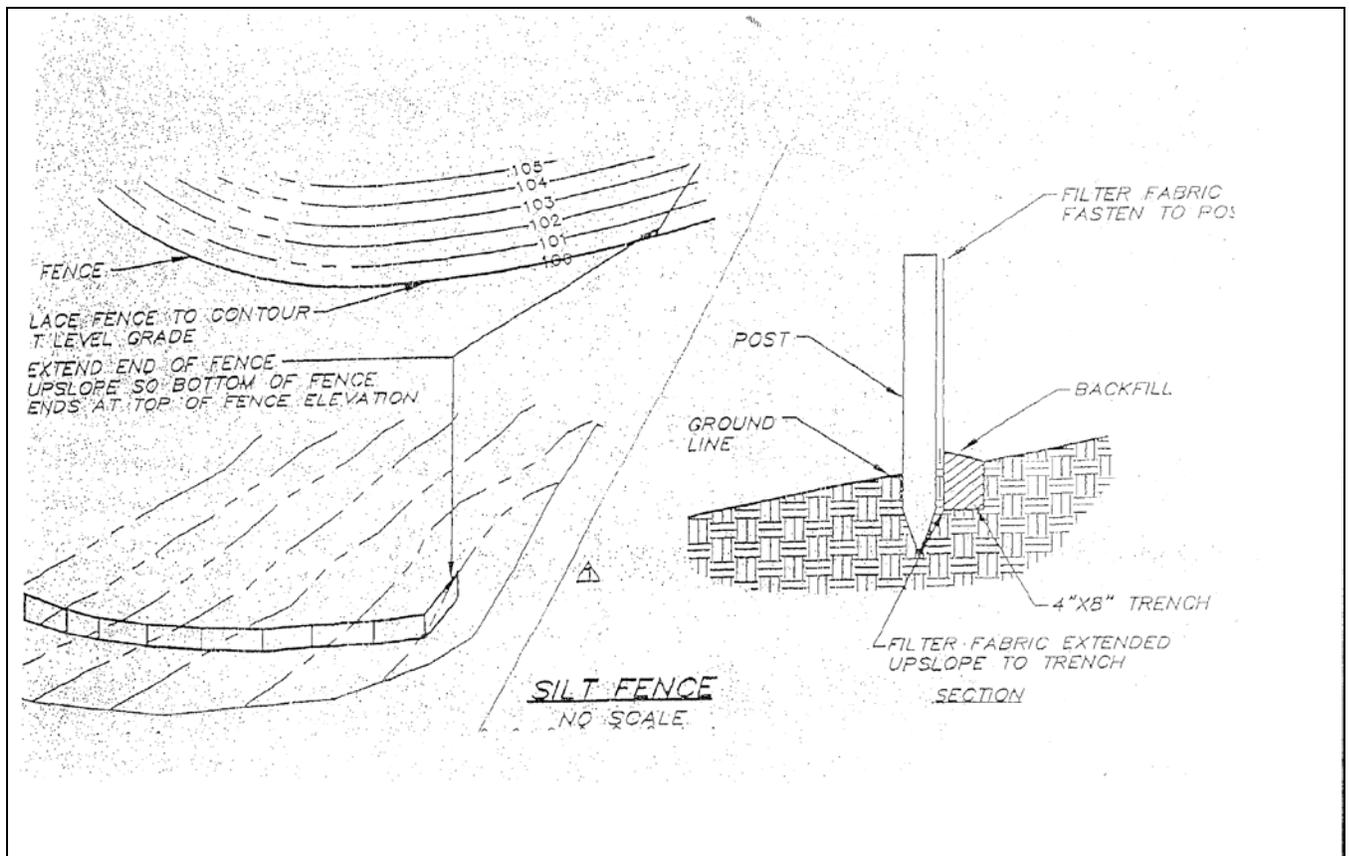
- All building sites should be inspected by builder or developer once a week and after each rainfall. When a problem is identified, repair or replace the facility immediately.
- Any sediment that is tracked onto public streets shall be scraped and deposited in a stable area. Do not flush sediment from streets with water.
- Avoid filling in existing drainage channels and roadside ditches that could result in water retentions and other problems on adjacent property and/or damage to adjacent roadways.

### Excavation of site

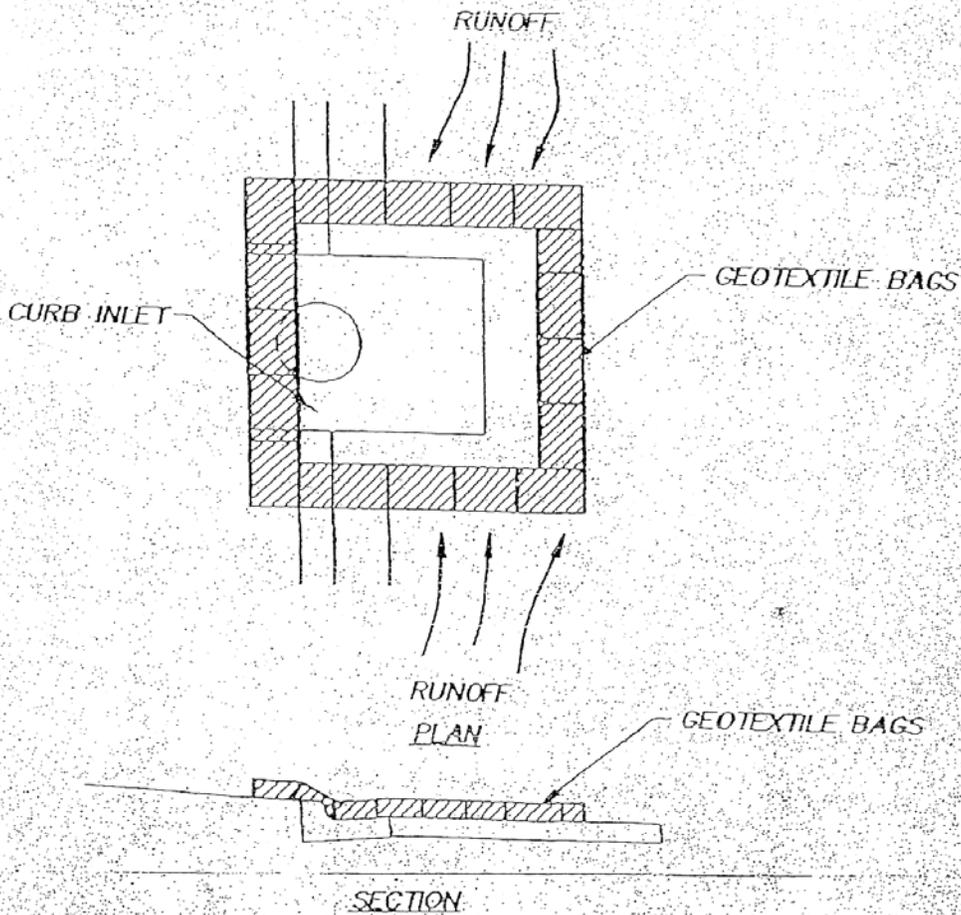
- Locate the excavation stockpiles away from any down-slope street, lake wetland, ditch, or drainage-way.
- Immediately after stockpiling, place sediment barriers around the perimeter of the piles.

### Revegetate the building site

- The lot must be revegetated immediately after all outside construction activities are completed; stabilize the lot with sod, seed and/or mulch.
- Once the sod and/or vegetation are established, remove any remaining temporary erosion and sediment control practices unless ordered to leave such in place.



1. FILL GEOTEXTILE BAGS APPROXIMATELY HALF FULL WITH 2 TO 3 INCH STONE OR GRAVEL.
2. LAY TIGHTLY IN A ROW CURVING UPSLOPE FROM THE CURB AND AWAY FROM THE INLET.
3. OVERLAP BAGS ONTO THE CURB AND EXTEND A MINIMUM OF 3 FEET INTO THE STREET.
4. IF USING MORE THAN ONE LAYER OF BAGS, OVERLAP THE BAGS WITH ROW BENEATH, AND LEAVE A ONE BAG GAP IN THE MIDDLE ON THE TOP ROW TO SERVE AS A SPILLWAY.
5. INSTALL DOWNSLOPE OF THE LOT TO KEEP SEDIMENT FROM WASHING DOWN THE STREET.
6. PLACE BAGS IN AN ARC AROUND CURB INLETS THAT ARE IN A SUMP POSITION.
7. INSPECT AND REPAIR AS NEEDED, AND REMOVE ANY ACCUMULATED SEDIMENTS AFTER EVERY STORM.



**PROTECTING A SUMP POSITION  
CURB INLET (LOW POINT)**



## Section Three

# Inspections Required

Inspections are required to be done at certain phases of construction to check for compliance with the currently adopted codes. To arrange for an inspection, contact the Community Development Department at (816) 741-9313. Please have the **Construction Address, Permit Number and Permit Holders Name** available when you call. A minimum of twenty-four (24) hours' notice is needed to allow for scheduling.

No inspections will be performed until erosion controls are in place per Parkville Construction Guidelines.

## Inspections

### Excavation and Footing Inspection

- A footing inspection is required after all forms and reinforcement steel is in place and before concrete is placed.
- Engineers soil test report and/or special design of footing may be required.
- Third party inspections are allowed by an approved design professional and in some cases may be required.

### Foundation Wall Inspection

- A foundation inspection is required after all forms and reinforcement steel is in place and before concrete is placed.
- Third party inspections are allowed by an approved design professional and in some cases may be required.

### Pre-backfill Inspection

- A pre-backfill inspection is required after all waterproofing is complete and drain tile is in place.
- Bracing or support requirements of *Section R404.1.7 Backfill Placement* of the 2012 IRC are met.

### Ground Rough Plumbing

- All underground or under slab plumbing must be inspected prior to covering.

### Water Inspection

- A water inspection is required after all underground piping; meter yoke, pit and lid are in place.
- Meter pit installation is required and inspected by Missouri American Water Company (816-741-2992).

### Sewer Inspection

- A sewer inspection is required when building sewer is connected to the sewer main and before backfill.
- For inspections of sewers served by the City of Parkville call (816) 215-5690.
- For inspections of sewers served by Platte County Sewer District call (816) 858-2052.

### Structural Slab Inspection

- A structural slab inspection is required after all forms and reinforcement steel is in place and before concrete is placed.
- Third party inspections are allowed by an approved design professional and in some cases may be required.

### Framing Inspection

- Building framing must be inspected after all framing and furring is complete and before covering with insulation or drywall.

### Top Rough Plumbing

- All rough plumbing must be inspected when drain/waste/vents and water piping are roughed in and before covering with insulation or drywall.

### Electrical Rough Inspection

- The electrical wiring must be inspected after all wiring, boxes, and recessed fixtures are installed and before covering with insulation or drywall.
- Boxes should be made up and home runs should be extended to the service location.

### Mechanical Rough Inspection

- Mechanical vents, ducts, and return air spaces require inspection and before covering with insulation or drywall.

### Gas Inspection

- All gas piping on the building side of the gas meter needs to be inspected after all piping is installed and before covering with insulation or drywall.
- Inspector shall approve a 10-psi air test, or 6" mercury test. A 60-psi air test is required for welded pipe.

- MGE will not install a gas meter until the inspection has passed and is cleared by the City.

#### Drywall Inspection

- An inspection of all drywall is required prior to taping and mudding.

#### Driveway Approach Inspection

- A driveway approach inspection is required after all forms and reinforcement steel is in place and before concrete is placed.

#### City Sidewalk Inspection

- A city sidewalk inspection is required after all forms and reinforcement steel is in place and before concrete is placed.

#### Occupancy Inspection

- An occupancy inspection is required prior to any occupancy of a building or addition.
- Occupancy inspections should not be called for until all items on the occupancy checklist in Section 10 of these guidelines are met.



## Section Four

# Footings and Foundation

The following guidelines are provided to assist in meeting the requirements of the 2012 IRC (Chapter 4) for typical residential footing and foundations. Requirements for concrete placement can be found in Section 5. Where guidelines are not specific, please contact the building inspector. A footing inspection is required after all steel is in place and before concrete is placed.

- The bottom of all footings must be a minimum of 36" below finished grade. (R403.1.4.1) amended.
- For light frame construction, @2000psf soil bearing capacity, the minimum footing width shall be 12" for 1 story, 12" for 2 story and 17" for 3 story structures. (Table R403.1)
- For 4" brick veneer over light frame construction, @2000psf soil bearing capacity, the minimum footing width shall be 12" for 1 story, 16" for 2 story and 24" for 3 story structures. (Table R403.1)
- All footings must have two #4 (1/2") bars continuous throughout the footing. Footings 24" wide require three #4 bars.
- Re-bar must be supported on risers, overlapped 18" and double-tied together.
- No less than 2,500 psi concrete may be used in footings, 5% air entrainment concrete is required if the concrete will be exposed to freezing and thawing during construction. (Table R402.2)
- Pads under masonry fireplaces must be 12" thick.
- Foundation anchor bolts are required at six foot spacing and within twelve inches of ends of each plate section. Anchor bolts are also required in slabs of walkout basements along the perimeter. Generally a six-inch curb wall is needed in order to keep the siding 6" above grade. (R403.1.6)
- Where footings and foundations are stepped, the footing and foundation must be continuous (in plain view) without cantilevering of foundation walls.
- No less than 3,000 lb. air entrained concrete may be used for foundation walls. (Table R402.2)
- Perimeter drain tiles are required where floors or crawl spaces exist below finished grade. The drain tile shall drain by gravity to daylight or drain into sump hole, where a sump shall be placed to pump the water to the outside of the building. (R405.1)



## Section Five

### Flat Work

#### Driveways and Sidewalks

##### City Sidewalks

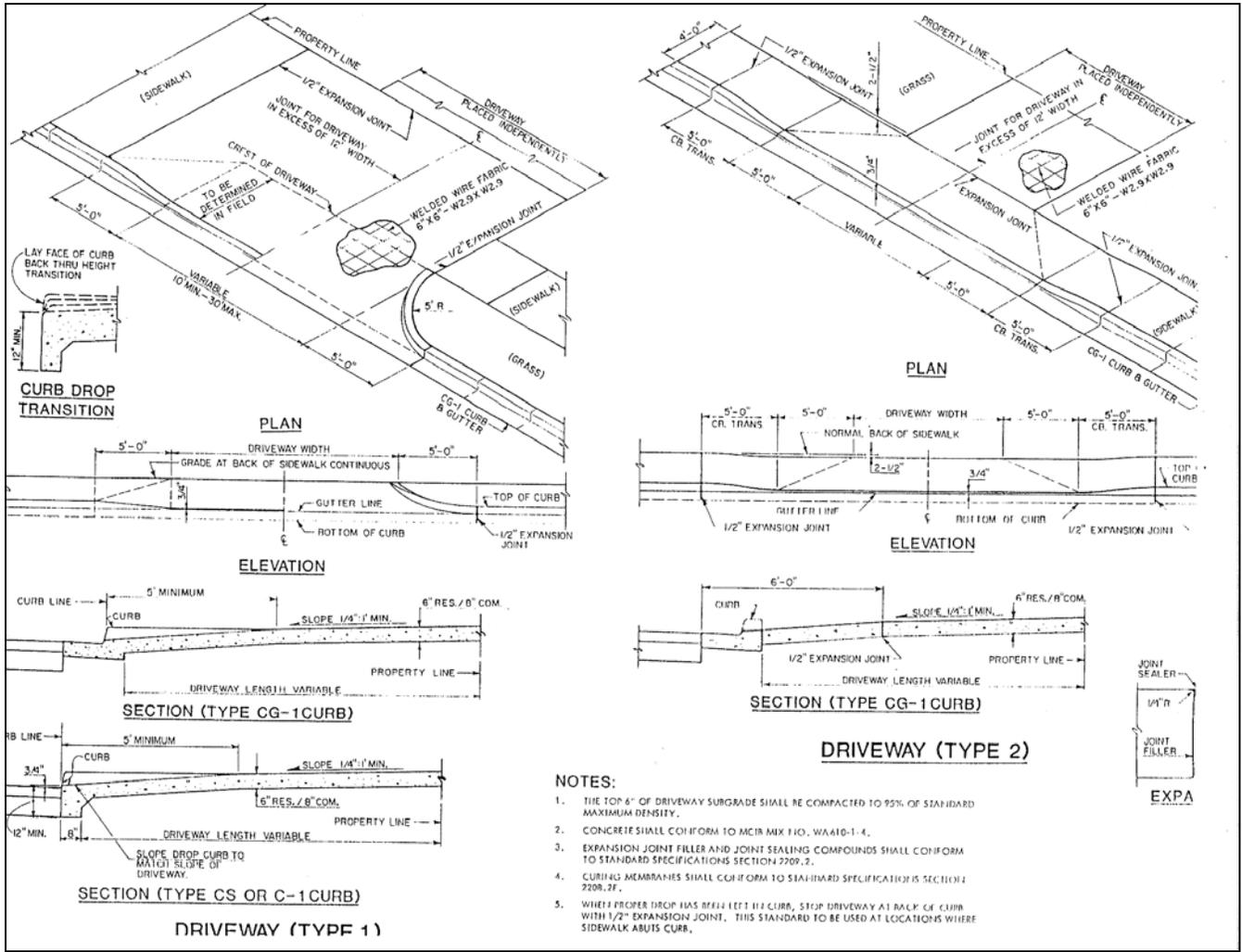
- All city sidewalks must be inspected.
- No less than 4,000 lb. air entrained concrete, or other appropriate mix, such as W-8610 may be used. 4" concrete depth minimum.
- Sidewalks will be poured on gravel base with two #4 rebar parallel throughout the length of the sidewalk, with an 18" overlap. Rebar must be chaired.
- Sidewalk slopes ¼" per foot minimum.
- Transverse contraction joints will be cut at a maximum interval of four feet.
- Expansion joints will be placed at all locations where sidewalk construction abuts existing sidewalks, structures and concrete driveways or at 50 feet, whichever is less.
- Sidewalks should be located no less than one foot (1') from the property line or the edge of the right-of-way within the right-of-way.
- All sidewalks will be installed according to the approved construction drawings for the project or plat.

##### Driveways

- All driveways on over-dig must be inspected.
- All driveways on over-dig must have a minimum of #4 bars, one foot on center each way, a minimum of ten (10) foot into over-dig, with a 50% tie. Rebar must be chaired.
- No less than 4,000 lb. air entrained concrete or other appropriate mix, may be used for concrete exposed to weather.

##### Driveway Approaches

- All driveway approaches must be inspected.
- All Type I, II, and Type III drives must conform to APWA specifications
- No less than 4,000 lb. air entrained concrete or other appropriate mix, may be used for concrete exposed to weather.
- Driveway approaches require 5' wings.



## Approach Detail

### Stamped Concrete

- Stamped concrete is permitted on private drives, walks and patios.
- Stamped concrete on driveway approaches and city sidewalks are prohibited unless approved by the Public Works Director.

## Concrete Slabs

### Garage Floors

- All garage floors on over-dig must be inspected
- All garage floors on fill will have a minimum of #4 rebar, 1-foot on center each way, doweled to foundation walls and tied to J bars, with 50% tie. Rebar must be chaired.

### Suspended Slabs

- All suspended slabs must be inspected.
- All suspended slabs are required to have engineered drawings submitted to the building inspection department before placement of concrete.

### Concrete Slabs

- All slabs on grade that are being poured on over-dig (fill) must be inspected.
- Slabs on over-dig must have a minimum of #4 bars, one foot on center each way, a minimum of ten (10) foot into over-dig, with a 50% tie. Rebar must be chaired.

## Concrete Placement

### Batching and Mixing

- Concrete shall be furnished by an acceptable ready mix concrete supplier and shall conform to ASTM C94.
- The consistency of concrete shall be suitable for placement conditions.
- Aggregates shall float uniformly throughout the mass and the concrete shall flow sluggishly when vibrated or spaded.
- The slump shall be kept uniform.

### Placement

- The limits of each concrete pour shall be predetermined by the contractor and shall be acceptable to the engineer. All concrete within such limits shall be placed in one continuous operation.
- Before concrete is placed, forms, reinforcement, and embedment shall be rigidly secured in proper position and all dirt, mud, water and debris shall be removed from the space to be occupied by the concrete.
- Bonding surfaces shall be cleaned of all foreign material and shall be free from laitance. Concrete shall not be placed on frozen sub-grade or in excavations, which have not been dewatered.
- Placement of concrete shall conform to requirements of ACI-304.
- Concrete shall be placed within forty-five (45) minutes of mixing operations, with the exception that the engineer may extend the period to ninety (90) minutes (maximum) dependent upon weather conditions.
- Concrete shall not be placed in horizontal layers exceeding eighteen (18) inches.
- During and immediately after placement, concrete shall be thoroughly compacted and worked around all reinforcement and embedment and into the corners of the forms.
- The concrete shall be vibrated or spaded to produce a solid mass without honeycombs or surface bubbles.

### Cold Weather Concreting

- Unless authorized in writing by the engineer, mixing and concreting operations shall be discontinued when the descending air temperature in the shade and away from artificial heat reaches 40 degrees F° or when forecast to drop below 40 degrees F° within 24

hours of placement, and shall not be resumed until an ascending air temperature in the shade and away from artificial heat reaches 35 degrees F°.

- When concrete work is authorized during cold weather, the aggregates may be heated by methods approved by the engineer prior to being placed in the mixer.
- No ingredient that is frozen or contains ice shall be placed in the mixer.
- The temperature of the concrete shall not be less than 60 degrees F° and not more than 80 degrees F° at the time of placement in the forms.
- Under no circumstances shall concrete operations continue when the air temperature is less than 20 degrees F°.
- No concrete shall be placed on frozen sub grade.
- Sudden cooling of concrete shall not be permitted.
- Concrete injured by frost action or freezing weather shall be removed and replaced at the contractor's expense.

### Hot Weather Concreting

The provisions of this section shall apply to all concrete work, which is done when the air temperature is above 80 degrees F° at the time of placement.

- The temperature of the concrete, when placed, shall not be high enough to cause excessive loss of slump, flash set or cold joints.
- In no case shall the temperature of concrete, when placed, exceed 90 degrees F°.
- Forms, reinforcing and sub grade surfaces against which the concrete is placed shall be wetted down immediately before placement.
- When the air temperature exceeds 90 degrees F° and as soon as practicable without causing damage to the surface, all exposed concrete shall be kept continuously moist by means of fog spray, wet burlap, cotton mats, or other means acceptable to the engineer. This cooling with water shall be in addition to the initial sealing by membrane curing compound.



## Section Six

### Framing

The following guidelines are provided to assist in meeting the requirements of the 2012 IRC Building Code for typical residential buildings. Where the guidelines are not specific, please contact the Building Inspection Department. Framing inspections will be done along with the electrical, plumbing and mechanical inspections.

#### Floor Construction

- Six (6) inch separation is required between finished grade and any untreated wood, framing or siding. (R317.1 (5))
- Treated wood is needed for plates, columns or posts on concrete foundations or floors, and for joists in crawl spaces with less than 18" of clearance to ground level. (R317.1)
- The maximum spans of floor joists shall comply with table (R502.3.1(1) and R502.3.1(2))
- I –joist and Trusses shall be installed per manufactures installation instruction.
- Joists under parallel bearing partitions shall be of adequate size to support the load. (R502.4)
- The end of each joist, beam or girder shall have not less than 1.5" of bearing on wood or metal and not less than 3" on masonry or concrete except where supported by approved joist hangers. (R502.6)
- Notches in solid lumber joist, rafters and beams shall not exceed 1/6<sup>th</sup> of the depth of the member, shall not be longer than 1/3<sup>rd</sup> of the depth of the member and shall not be located in the middle 1/3<sup>rd</sup> of the span. Notches at the ends of the members shall not exceed 1/4<sup>th</sup> the depth of the member. The tension side of members 4" or greater in nominal thickness shall not be notched except at the end of the member. The diameter of holes bored or cut into members shall not exceed 1/3<sup>rd</sup> the depth of the member. Holes shall not be closer than 2" to the top or bottom of the member, or to any other hole located in the member. Where the member is also notched, the hole shall not be closer than 2" to the notch. (R502.8.1)
- Headers used to frame floor openings that exceed 4' long shall be doubled. (R502.10)

#### Walls Construction

- Sill plate anchor bolts are required at six foot spacing and within twelve inches of ends of each plate section. Anchor bolts are also required in slabs of walkout basements along the perimeter. (R403.1.6)
- The size, height and spacing of studs shall be in accordance with Table R602.3. (5). (R602.3.1)
- Studs more than 10 feet in height shall be in accordance with Table R602.3. (5).
- Double top plates shall overlap a minimum of 24" inches. (R602.3.2)

- Top plates cut for piping or ductwork shall be strapped with 16 gage X 1.5 inches wide metal ties with eight (8) 16d nails at each side. (R602.6.1) (Figure 602.3.2)
- Any studs in an exterior wall or bearing partition may be cut or notched to a depth not exceeding 25 percent of its width. Studs in nonbearing partitions may be notched to a depth not to exceed 40 percent of a single stud width. Any stud may be bored or drilled, provided that the diameter of the resulting hole is no greater than 60 percent of the stud width, the edge of the hole is no closer than 5/8<sup>th</sup> inch to the edge of the stud and the hole is not located in the same section as a cut or notch. Studs located in exterior walls or bearing partitions drilled over 40 percent and up to 60 percent shall also be doubled with no more than two successive doubled studs bored. (R602.6)
- Exterior and interior walls shall be braced in accordance with (R602.10)
- Fire blocking shall be provided to cut off all concealed draft openings. (R302.11)
  - a. In all concealed spaces of stud walls and partitions.
  - b. In furred spaces, vertically at ceiling and floor level and horizontally at 10 foot intervals.
  - c. At all interconnections between concealed vertical and horizontal spaces.
  - d. At all top and bottom plate penetrations.

### Roof Construction

- Access to each attic shall be provided by an opening not to be less than 22" (inches) by 30" (inches) and shall be located in a hallway or other readily accessible location. (R807)
- The ridge board must be equal or greater in depth than the end cut of the rafter. (R802.3)
- Joist framing from opposite side of a beam shall overlap 3" or butt together with splice plate. (R802.3.2)
- Rafters shall be framed in accordance with Section R802.3.
- Purlins may be used to reduce the span of rafters. Purlins shall be sized no less than the rafters they support. (R802.5.1)
- Purlin struts, ridge and valley supports shall only land on load bearing walls or members. (R802.5.1)
- The minimum slope of a purlin strut is 45 degrees. (R802.5.1)
- Ceiling joist and rafters connections shall be made in accordance to Section R802.3.1

### Stairways

- The maximum riser heights shall be 7 ¾ inches and the minimum tread depth shall be 10 inches. (R311.7.5.1)(R311.7.5.2)
- Headroom in all parts of the stairway shall not be less than 6 feet 8 inches. (R311.7.2)
- Winders are permitted, provided that the width of the tread at a point not more than 12 inches from the side where the treads are narrower is not less than 10 inches and the minimum width of any tread are not less than 6 inches. (R311.5.3.2)
- Spiral stairways shall conform to Section R311.7.5.2.1

### Handrails

- Handrails are required for all stairs with four (4) or more risers. (R311.7.8)
- Handrails shall be continuous the full length of the stairs. (R311.7.8.2)
- Handrails shall have a minimum height of 34 inches and a maximum height of 38 inches. (R311.7.8.1)

## Guards

- Porches, balconies or raised floor surfaces located more than 30 inches above the floor or grade below shall have guards not less than 36 inches in height. (R312.1.2)
- Guards shall not allow the passage of a 4 inch sphere. Guards on stairways shall not allow the passage of a 4 3/8 inch sphere. Triangular openings made by steps and the bottom rail of a guard shall not allow the passage of a 6 inch sphere. (R312.1.3)

## Egress Windows

- All sleeping rooms and basements must have at least one operable door or window leading directly to the outside for emergency egress. (R310.1). Exception: Basements used only to house mechanical equipment and not exceeding a total floor area of 200 square feet.
- Windows must have at least 5.7 sq ft of open able space. (R310.1.1)
- The minimum net clear opening height shall be 24 inches. (R310.1.2)
- The minimum net clear opening width shall be 20 inches. (R310.1.3)
- The finished sill height shall be not more than 44 inches above the floor. (R310)

## Chimneys and Fireplaces

- Masonry chimneys and fireplaces shall be constructed, anchored, supported and reinforced as required in Chapter 10 of the 2012 IRC.
- Factory built fireplaces must be installed in strict accordance with manufactures installation instructions.

## Insulation

- Insulation shall be installed per Chapter 11 Energy Efficiency of the IRC.



## Section Seven

### Electrical

The following guidelines are provided to assist in meeting the requirements of the 2005 National Electrical Code and the 2012 IRC Chapters 33 to 42 for typical residential buildings. Where guidelines are not specific, please contact the Building Inspection Department.

#### Inspections

- A service inspection is performed with the all-trade inspections. The service panel, disconnect, service entrance conductors and grounding need to be complete. Please have the panel cover off, but nearby. The electrical service will not be released to the utility company until all rough-in inspections are complete.
- A rough-in inspection is performed with the all-trade inspections. All of the wiring, boxes, and recessed fixtures need to be installed. The wiring should be made up and run to the service location.
- A final inspection is performed with the final inspection of the structure. All the electrical fixtures must be installed and complete. All cover plates must be installed. All electrical outlets, GFCI outlets and AFCI outlets will be tested.

#### Services

- 100 amp residential services shall have #4 copper or #2 aluminum service entrance conductors, with #6 copper grounding electrode conductors connected from the service neutral grounding bar to both an 8' ground rod and the water service where it enters the building. (E3603.1)
- 200 amp residential services shall have 2/0 copper or 4/0 aluminum entrance conductors, with #4 copper grounding electrode conductors connected from the service neutral grounding bar to the water service where it enters the building and a #6 copper grounding electrode conductor from the neutral grounding bar to an 8' ground rod. (E3603.1)
- Grounding conductors must be protected from physical damage. (E3610.2)

#### Receptacle Outlets (E3901)

- In every kitchen, family room, dining room, living room, parlor, library, den, sun room, bedroom, recreation room, guest room or other similar rooms of dwelling units, receptacle outlets shall be installed so that no point along the floor line in any wall space is more than 6' (six foot), measured horizontally from an outlet in that space, including any wall space 2' (two foot) or more in width. The fixed panel of a sliding door is considered as wall space. (Section E 3901.2)

- Wall Space - A wall space shall include the following:
  - Any space that is 2' (two foot) or more in width, including space measured around corners and that is unbroken along floor line by doorways, fireplaces and similar openings.
  - The space occupied by fixed panels in exterior walls, excluding sliding panels.
  - The space created by fixed room dividers such as railings and free standing bar-type counters, shall be included in the 6' (six foot) measurement. There should never be more that 12' (twelve feet) between each receptacle on a continuous wall space. Where floor receptacles are necessary, they shall be dust proof.

#### Kitchen Receptacle (E3901)

- Receptacles installed in kitchen serving countertop spaces, shall be supplied by not fewer than two small-appliance branch circuits.
- In kitchen and dining areas of dwelling units, a receptacle outlet shall be installed at each counter space wider than 12 inches. Counter tops separated by range tops, refrigerators or sinks shall be considered as separate counter space. Receptacles rendered inaccessible by appliances fastened in place or appliances occupying dedicated spaces shall not be considered as these required outlets.
- Countertop receptacles are required such, that no point of the countertop is more than 24" (inches) (horizontally) from a receptacle.
- Island counter spaces require one receptacle for each counter top 12 inches x 24 inches or greater.

#### Appliance Receptacle (E3901.5)

- Appliance outlets installed for specific appliances, such as laundry equipment, shall be installed within 6' (six feet) of the intended location of the appliance.

#### Bathroom Receptacle (E3901.6)

- At least one wall receptacle outlet shall be installed in bathrooms and such outlet shall be located within 36" inches of the outside edge of each lavatory basin.
- The receptacle outlet shall be located on a wall that is adjacent to the lavatory basin location.
- Receptacle outlets shall not be installed in a face up position in the work surfaces or countertops in a bathroom basin location.

#### Outdoor Receptacle (E3901.7)

- At least one receptacle outlet accessible at grade level and not more than 6' (six feet) 6" (six inches) above grade, shall be installed outdoors at the front and back of each dwelling unit having direct access to grade.

#### Basement and Garage Receptacle (E3901.9)

- At least one receptacle outlet, in addition to any provided for laundry equipment, shall be installed in each basement and garage that is provided with electrical power.
- Receptacles placed in garage shall be kept at least 18" above the floor surface.

### Laundry areas (E3901.8)

- At least one receptacle outlet shall be installed to serve laundry appliances.
- The laundry area shall have a 20-amp circuit. This circuit shall be exclusively for the laundry receptacles and shall not be used for any lighting in this area.

### Hallways (E3901.8)

- Hallways of 10' (feet) or more in length shall have at least one receptacle outlet.

### Ground-Fault Protection GFCI (E3902)

- Bathroom receptacles, all 125 volt, single phase, 15 amp or 20 amp receptacles installed in bathrooms shall have ground-fault circuit interrupter (GFCI) protection. (E3902.1)
- Garage receptacles, all 125 volt, single phase, 15 amp or 20 amp receptacles installed in garage and grade level portions of unfinished accessory buildings used for storage or work shall have GFCI protection. (E3902.2)
- Outdoor receptacles, all 125 volt, single phase, 15 amp or 20 amp receptacles installed outdoors shall have GFCI protection. (E3902.3)
- Crawl space receptacles, where a crawl space is at or below grade level, all 125 volt, single phase, 15 amp or 20 amp receptacles installed in such spaces shall have GFCI protection. (E3902.4)
- Unfinished Basement receptacles, all 125 volt, single phase, 15 amp or 20 amp receptacles installed in unfinished basements shall have ground-fault circuit interrupter (GFCI) protection. (E3902.5)
- Kitchen receptacles, all 125 volt, single phase, 15 amp or 20 amp receptacles that serve countertop surfaces shall have GFCI protection. (E3902.6)
- Bar sink receptacles, all 125 volt, single phase, 15 amp or 20 amp receptacles that serve countertop surfaces, and are located within 6' (six feet) of the outside edge of a wet bar sink shall have GFCI protection. Receptacle outlets shall not be installed in a face up position in the work surfaces or countertops. (E3902.7)

### Arc-Fault Protection AFCI (E3902)

- Bedroom outlets, all branch circuits that supply 125 volt, single phase, 15 amp or 20 amp outlets installed in dwelling unit bedrooms shall be protected by an arc-fault circuit interrupter listed, to provide protection of the entire branch circuit. (E3902.12)

### Clothes Closets (E4003.12)

- Surface-mounted incandescent luminaires in closets shall be installed with a minimum of 12" (twelve inches) clearance (measured horizontally) from the front of the shelf.
- Recessed fixtures with solid lenses, or florescent fixtures may be installed with a minimum clearance (measured horizontally) of 6" (six inches) from the front of the shelf.

### Smoke Detectors Location (R314.3)

- Smoke detectors shall be installed in each sleeping room, outside of each sleeping room and at least one on every floor. (R314.3)

- Smoke detectors shall be hard wired and interconnected with battery backup. (R314.4)

### General Installation Requirements

- At least one wall switch controlled lighting outlet shall be installed in every habitable room, guest room, bathroom, stairways, hallways, garages and outdoor entrance. (E3903.2)
- Switches are required at each floor level to control the lighting of stairways with six (6) or more risers. (E3909.3.3)
- At least one (1) wall switch controlled lighting outlet shall be installed at the point of entrance to an attic, under floor space, utility room and basement where these spaces are used for storage or containing equipment that might require service. The light shall be located near the equipment requiring service. (E3803.4)
- Conductors of different systems should not be run together in the same raceway unless all conductors are insulated with the maximum voltage of any conductor within the enclosure. Conductors of high voltage and low voltage systems shall not occupy the same wiring enclosure.
- Communication circuits should be kept separate from other electrical circuits by 2" (two inches).
- All cables shall be protected from physical damage, where necessary, by conduit, pipe, guard strips or other means. (E3802.3.2)
- Where wire is installed in bored holes, they should be placed at the approximate center of the stud so that the edge of the hole is not closer than 1¼ inches from the edge. If the wire is closer than 1¼ inches, the cable must be protected by a steel plate or bushing at least 1/16 inches thick. Table 3802.1
- Staples, straps or similar fittings so designed and installed as not to damage the cable, shall secure non-metallic sheathed cable. Cables shall be secured in place at intervals not exceeding 4½ feet and within 12 inches from every cabinet, box or fitting. (E3702.1)
- Cables in environmental air having a non-metallic covering passing through stud cavities and joist spaces used for air handling, such wiring shall pass through such spaces perpendicular to the long dimension of the space. (3904.7)
- All splices and connections are required to be made in junction boxes, or switch boxes. All wire in junction boxes (including grounding conductors) must be properly spliced with twist locks or other approved devices.
- At least 6 inches of conductor shall be left at each outlet and switch point for connection of fixtures and devices.
- All boxes should be adequate in size to allow the proper cubic inch area for the number or wires installed therein. (E3905.12)
- Metallic boxes are required to be connected to the grounding system by connectors or clamps, and busing or clamp shall be used for the wire where it passes through the box. (E3805.2)
- Outlet boxes used to support ceiling fans shall be listed for that purpose. (E3905.8)
- Each circuit breaker shall be labeled to identify its purpose. (E3404.12)



## Section Eight

### Plumbing

The following guidelines are provided to assist in meeting the requirements of 2012 IRC. Where the guidelines are not specific, please contact the Building Inspector.

#### Sewer Inspection

- A sewer inspection is required when building sewer is connected to the sewer main and before backfill.
- Sewers served by the City of Parkville must conform to and be installed per APWA Standards
- For inspections of sewers served by the City of Parkville call (816) 215-5690.
- For inspections of sewers owned by Platte County Sewer District call (816) 858-2052.

#### Water Inspection

- Underground exterior water piping must be 42" inches below grade. (P2603.5)
- Backfill shall be free of rocks, construction materials and other debris. (P2604.3)
- A water inspection is required after all underground piping, meter yoke, pit and lid are in place.
- Meter pit installation is required and inspected by Missouri American Water Company (816-741-2992).

#### Ground Rough Inspection

- Underground inspection shall be made after trenches or ditches are excavated and bedded, piping installed, and before any backfill is put in place (P2503.2)

#### Top Rough Inspection

- Rough-in inspection shall be made after the rough-in, framing, fire blocks, fire stops, draft stops and bracing are in place and all sanitary, storm and water distribution piping are roughed in, and prior to the installation of wall or ceiling membranes. (P2503.5.1)

#### General Information

- Water pressure regulators are required where the water pressure exceeds 80 psi. (P2903.3.1)
- All plumbing piping shall be supported in accordance with Section P2605.

- An accessible shut-off valve is required where the water service enters a single-family dwelling, duplex unit, or apartment. (P2903.9.1)
- Water piping shall be sized according to Section P2903.7.
- Air admittance valves must comply with P3114. The Building Official must approve air admittance valves before installation.
- Solder and fluxes with a lead content exceeding 0.2 % are prohibited. (P2904.12)

## Gas Service

Prior to acceptance and initial operation, all piping installations shall be inspected and pressure tested to determine that the materials, design, fabrication, and installation practices comply with Chapter 24 of the 2012 IRC.

## Gas Piping

- Corrugated stainless steel tubing (CSST) shall comply with G2414.5.3.
- Corrugated stainless steel tubing (CSST) shall be installed per manufacturer's installation instructions.
- Corrugated stainless steel tubing (CSST) shall be bonded per manufacturer's installation instructions.
- All appliances shall be listed and labeled. (G2404.3)
- Interior gas piping must withstand a 15-minute mercury gauge pressure test with a 6" (six inch) column of mercury or a 15-minute air pressure test with no less than 10 PSI. Welded piping shall be 60 PSI for 30 minutes using air pressure only. (G2417)
- Exterior buried gas piping shall be coated pipe, wrapped pipe, or approved PVC or PE pipe. (G2415.8)
- Underground piping shall be installed 12" (twelve inches) below grade. Plastic piping requires a #18 copper trace wire attached to the piping and extended to grade. (G2415.9) (G2415.14.3)
- Gas piping shall not be installed in or through circulating air ducts, clothes chute, chimney or gas vent, ventilating duct, and dumbwaiter or elevator shafts. (G2415.1)
- Drip legs are required for the collection of condensation ahead of all appliance connections where necessary. (G2419)
- Accessible shut-off valves are required on the gas supply lines outside of each appliance, ahead of the union connection, and within 6' (six feet) of the appliance. (G2420.5)



## Section Nine

### Drywall

#### Drywall Inspection

- An inspection of all drywall is required prior to taping and mudding.

#### Garage Separation

- The garage shall be separated from the residence by not less than ½ inch gypsum board. (R302.6)
- Garages beneath habitable rooms shall be separated from all habitable rooms above by not less than 5/8 inch Type X gypsum board. (R302.6)

#### Bathtub and Shower Spaces

- Water resistive gypsum board or cement board shall be used in bathtub and shower spaces a minimum of 6' (six feet) above the floor. (R307.2)

#### Fasteners

- Gypsum board shall be installed with fasteners spaced in accordance with Table R702.3.5.



## Section Ten

# Final Inspection and Certificate of Occupancy

**NOTE:** Occupancy inspections should not be scheduled until all items on the occupancy checklist are complete.

**OCCUPANCY INSPECTION:** An occupancy inspection is required before permitting any occupancy of any building or addition.

**ISSUANCE OF CERTIFICATE:** After the building official inspects the building or structure and finds no violations of the adopted code or other laws that are enforced by the code enforcement agency, the building official shall issue a certificate of occupancy.

**TEMPORARY CERTIFICATE OF OCCUPANCY:** If the building official finds that no substantial hazard will result from occupancy of building or portion of the same building that has not yet been completed, a temporary certificate may be issued for the use of a portion or portions of a building or structure prior to the completion of the entire building or structure.

**POSTING:** The temporary certificate of occupancy shall be posted in a conspicuous place on the premises and shall not be removed except by the building official.

Prior to issuance of a TCO, a nonrefundable fee of \$50.00 must be paid along with any other applicable fees associated with determining building compliance for temporary occupancy.

A TCO is valid for 30 days, unless approved for a 30-day extension. Except for seasonal work, no TCO shall be extended for more than a total of 90 days. For seasonal work a TCO may be allowed for 180 days. Prior to issuance of any extension of said TCO, a nonrefundable \$25.00 issuance fee must be paid for each extension.

## OCCUPANCY CHECKLIST

- Does the final grade slope away from house 6 inches in 10 feet. (401.3) (Check if side yard swale is required.)
- Is all untreated exterior wood at least 6" (six inches) above final grade? (R317.1)
- Are all gutters, downspouts and splash-blocks in place?
- Are driveways, sidewalks and steps complete?
- Are all public streets, sanitary and storm sewers completed and in acceptable condition?
- Is the required separation between garage and dwelling intact and all holes filled? (R302.5.1)
- Is entrance door in garage 1 3/8" solid core? (R302.5.1)
- Are all stairs with 4 or more risers equipped with handrails? (311.7.8)
- Do all open stairwells have guardrails on two sides?
- Are address numbers posted and visible from the street, and a minimum 4" tall?
- Is electrical service complete, panel cover on, and all circuits identified?
- Are all covers and faceplates for electrical fixtures installed?
- Are all light fixtures complete and in working order?
- Are all receptacles, smoke detectors, arc fault and ground fault circuits working?
- Is air conditioner provided with fuse or breaker as required by nameplate?
- Are all plumbing fixtures properly connected, and in working order?
- Are all stubbed in plumbing fixtures capped off?
- Is the building sewer clean out accessible?
- Is the water service shutoff valve accessible?
- Do all fireplace chimneys (masonry or metal) extend two feet above any roof within ten feet?
- Are all chimney spark arrestors installed?
- Is all the paint and trim finished?
- Is grinder pump in working order and emergency switch in place with emergency number posted?

\_\_\_\_Are all guardrails and handrails installed?

\_\_\_\_Are all intermediate guardrails set so a 4" sphere cannot pass through?

\_\_\_\_Are all deck joist hangers in place?



## Section Eleven

# Basement Finish

The following information is required to obtain a Building Permit for residential basement finishes.

### Permit Information

- A completed Building Permit application.
- Two (2) sets of construction plans or shop drawings.
- The builder and subcontractors must have a current City of Parkville occupational license. Electrical and plumbing contractors must show proof of a masters license, proof of a passing score on an experior test or furnish a copy of a license from a municipality in the metro area.

### Minimum Plan Information

- Plans shall be drawn so that the entire scope of work is shown.
- The use of all rooms clearly labeled, such as storeroom, bedroom, bathroom, office, etc.
- Show ceiling heights.
- Show location of electrical panel.
- Show location of all smoke detectors.
- Show location of all lighting, ceiling fans, closets, wet bars, home theaters, etc.
- Show all exits.
- All existing construction should be labeled existing.

### General Requirements

- All plumbing clean-outs must be accessible.
- All gas valves must be accessible.
- All electrical junction boxes must be accessible.
- Smoke detectors shall be installed in each sleeping room, outside of each sleeping room and at least one on every floor. (R314.3)
- Smoke detectors in existing building shall be installed as in new construction (R314.3.1)
- Smoke detectors shall be hard-wired and interconnected with battery backup. (R314.4) See exception (R314.4)
- All construction shall comply with the 2012 IRC and 2005 NEC.



## Section Twelve

# Swimming Pools and Hot Tubs

The following information is required to obtain a Building Permit for residential swimming pools and hot tubs. A Building Permit is required to install all swimming pools and hot tubs, which are twenty-four (24) inches or more in depth.

### Permit Information

- A completed Building Permit application.
- Two (2) pre-construction staked plot plans, sealed by a Missouri registered land surveyor. The plot plan must show the proposed swimming pool, as staked, with setbacks from property lines, easements, platted building lines and siltation control measures indicated.
- Two (2) full sets of building plans sealed by a Missouri registered Architect or Engineer.
- If the structure is to be built in a neighborhood that is regulated by an architectural review board that board prior to submittal to the City shall approve the plans.
- The builder and subcontractors must have a current City of Parkville occupational license. Electrical and plumbing contractors must show proof of a masters license, proof of a passing score on an Experior test or furnish a copy of a license from a municipality in the metro area.

### Minimum Plan Information

- Show type and location of barriers enclosing the pool or hot tub
- Provide manufacturer's specifications, drawings and installation instructions.
- Indicate provisions for filling and draining of pool.

### General Requirements

- Pools and hot tubs shall be located in rear yard and must maintain a minimum of 10' (ten feet) from property lines in R1, R2 and R3 Zoning.
- Pools and hot tubs shall be located in rear yard and must maintain a minimum of 5' (five feet) from property lines in R4 Zoning.
- Only U.L. listed approved materials will be approved for use.
- A barrier as required by the 2012 IRC Appendix G must enclose pools and hot tubs.
- Barrier must be installed before the pool is filled.
- An electrical bonding inspection and final inspection are required on all pools.
- At least one electrical 120 volt, GFCI protected outlet must be provided between 10' (ten feet) and 20' (twenty feet) from the pool or hot tub.



## Section Thirteen

# Retaining Walls and Fences

### Retaining Walls

- All walls retaining over 4' (four feet) of unbalanced fill require a building permit.
- All walls retaining over 4' (four feet) of unbalanced fill require engineering.
- Any wall constructed within 2' (two feet) of property line requires Board of Aldermen approval.
- Wood retaining walls shall use preservative treated wood.

### Fences

- All fences over 6' (six feet) in height require a permit.
- Wood fences shall have the finished side facing out.
- Fences shall only be constructed within the property lines.
- All fences on the premises shall be structurally sound and constructed of metal, wood, masonry or other inert material.
- Fences shall be maintained so that they do not constitute a blighting influence, nor an element leading to the progressive deterioration and downgrading of neighborhood property values.

### Swimming Pool Barriers

- All barriers for pools, spas, and hot tubs must be in compliance with the 2012 IRC Appendix G.

### Neighborhood Covenants

- If your property is regulated by neighborhood covenants please contact the homeowners association to see if they have any additional requirements or restrictions.



## Section Fourteen

### Decks

The following information is required to obtain a building permit to construct a deck. Permits are required for decks over 30" above grade.

#### Permit Information

- A completed Building Permit application.
- Two (2) pre-construction staked plot plans, sealed by a Missouri registered land surveyor. The plot plan must show the proposed deck with setbacks from property lines, easements, platted and building lines.
- Two (2) sets of construction plans or shop drawings.
- If the structure is to be built in a neighborhood that is regulated by an architectural review board that board prior to submittal to the City shall approve the plans.
- The builder and subcontractors must have a current City of Parkville occupational license. Electrical and plumbing contractors must show proof of a masters license, proof of a passing score on an Experior test or furnish a copy of a license from a municipality in the metro area.

#### Minimum Plan Information

- Pier locations, depth and size.
- Size and material of post, beams and joists.
- Size, height and spacing of guardrails and spindles.

#### General Requirements

- Deck cannot encroach within the required setbacks for the zoning district.
- Deck piers must extend 36" below grade and bear on undisturbed soil.
- Guards must be not less than 36" above the deck.
- Guards are required on all open sides of stairs and shall not be less than 34" above the nosing of treads.
- A graspable handrail shall be provided on all stairways of four (4) or more risers.



## Section Fifteen

# Accessory Structures

The following information is required to obtain a building permit for an accessory building or structure. All accessory structures over 120 square feet need a permit.

### Permit Information

- A completed Building Permit application.
- Two (2) pre-construction staked plot plans, sealed by a Missouri registered land surveyor. The plot plan must show the proposed swimming pool, as staked, with setbacks from property lines, easements, platted building lines and siltation control measures indicated.
- Two (2) full sets of building plans sealed by a Missouri registered Architect or Engineer. Plans must show details as described in the attached minimum plan information for one and two family dwellings.
- If the structure is to be built in a neighborhood that is regulated by an architectural review board, that board prior to submittal to the City shall approve the plans.
- The builder and subcontractors must have a current City of Parkville occupational license. Electrical and plumbing contractors must show proof of a masters license, proof of a passing score on an Experiior test or furnish a copy of a license from a municipality in the metro area.

### General Requirements

- Accessory buildings which are not a part of the main building although connected by an open breezeway, may be constructed in a rear yard, provided such accessory building does not occupy more than thirty percent (30%) of the area of the required rear yard and provided it is not located closer than 5' (five feet) to the rear lot line nor closer than 3' (three feet) to a side lot line.
- No accessory building shall project beyond a required yard line along any street.



## Section Sixteen

# Security Systems

The following information is required to obtain an electrical permit for a security system.

### Permit Information

- A completed Electrical Permit application.
- A completed Security System Permit application
- The builder and subcontractors must have a current City of Parkville occupational license. Electrical and plumbing contractors must show proof of a masters license, proof of a passing score on an Exporior test or furnish a copy of a license from a municipality in the metro area.

### Security System Operation

- Chapter 230 of the Parkville Municipal Code governs the use of security systems.



## Section Seventeen

# Amendments to the 2012 International Residential Code

### AMENDMENTS TO CHAPTER 1 - SCOPE AND ADMINISTRATION

#### **Section R101.1 is amended to read as follows:**

**R101.1 Title.** These provisions shall be known as the *Residential Code for One- and Two-family Dwellings of the City of Parkville, MO* and shall be cited as such and will be referred to herein as "this code."

#### **Section R101.2 is amended to read as follows:**

**R101.2 Scope.** The provisions of the International Residential Code for One- and Two-Family Dwellings shall apply to the construction, alteration, movement, enlargement, replacement, repair, equipment, use and occupancy, location, of detached one- and two-family dwellings and multiple single-family dwellings (townhouses) not more than three stories in height with a separate means of egress and their accessory structures. The removal and/or demolition of any structures shall comply with all pertinent sections of the International Building Code and the International Existing Building Code.

#### **Section R102.5 is added to read as follows:**

**R102.5. Appendices Adopted.** The following appendices are adopted as part of the code.

1. Appendix A - Sizing and capacities of gas piping.
2. Appendix B - Sizing of venting systems serving appliances equipped with draft hoods, Category 1 appliances, and appliances listed for use and type B vents.
3. Appendix C - Exit Terminals of mechanical draft and direct-vent venting systems.
4. Appendix D - Recommended procedure for safety inspection of an existing appliance installation.
5. Appendix E - Manufactured housing used as dwellings.
6. Appendix G - Swimming pools, spas and hot tubs.
7. Appendix H - Patio Covers.
8. Appendix J – Existing Buildings and Structures.
9. Appendix K - Sound Transmission.
10. Appendix L – Permit fees
11. Appendix N – Venting Methods
12. Appendix O - Automatic Vehicle Gate

**Section R102.8 is added to read as follows:**

**R102.8 Moved Buildings and Temporary Buildings.** Buildings or structures moved into or within the jurisdiction shall comply with the provisions of this code for new buildings or structures as determined necessary by the Building Official for the general safety and welfare of the occupants and the public.

**Section 103.4 is added to read as follows:**

**103.4 Division of Building Safety.** The Division of Building Safety of the Community Development Department will be inserted where the Department of Building Safety is referenced throughout this document.

**Section R105.10 is added to read as follows:**

**R105.10 Moving buildings – moving permits.** No person shall move any building or structure having a floor area of 200 or more square feet, upon, across, or over any highway, street, alley, or sidewalk in the City without first obtaining a permit to do so, issued by the Building Official.

**R105.10.1 Moving permit applications.** All applications for permits to move buildings or other structures shall be made to the Building Official, and such application shall state and be in compliance with the following procedures prior to issuance of the permit.

1. The dimensions of the building or structure as to length, height at its highest point when loaded for moving, and width.
2. The definite description of the building or structure proposed to be moved giving street number, construction materials, dimensions in square feet, number of rooms and condition of exterior and interior and floor plan of building if located within the city.
3. The plot plan to scale with legal description of the lot from which the building is to be moved, giving the lot number, block number and subdivision, proposed use of the lot, if located within the City.
4. The plot plan to scale with the legal description of the lot to which it is proposed such building be moved, giving the lot number, block number and subdivision, if located within the City.
5. The day and hour when the moving is to commence and length of time of the move. In no event will a moving be allowed on a Saturday or Sunday or a holiday unless specially allowed by the Building Official.
6. The highways, streets, alleys or sidewalks over, along, or across which the building or structure is proposed to be moved.
7. The application shall be made not less than 14 calendar days prior to the commencement of the move.
8. Written approval from the Public Works Department and Police Department shall accompany the permit application.
9. The approved foundation design, if located within the city.

**Section R108 is repealed and replaced to read as follows:**

**Section R108 Fees.**

**R108.1 Payment of fees.**

A permit shall not be valid until the fees prescribed by law have been paid. Nor shall an amendment to a permit be released until the additional fee, if any, has been paid.

**R108.2 Schedule of permit fees.**

On buildings, structures, electrical, gas, mechanical and plumbing systems or alterations requiring a permit, a fee for each permit shall be paid as required, in accordance Appendix L, *Permit Fees*.

**R108.3 Building permit valuations.**

Building permit valuation shall include total value of the work for which a permit is being issued, such as electrical, gas, mechanical, plumbing equipment and other permanent systems, including materials and labor.

**R108.4 Related fees.**

The payment of the fee for the construction, alteration, removal or demolition for work done in connection with or concurrently with the work authorized by a building permit shall not relieve the applicant or holder of the permit from the payment of other fees that are prescribed by law.

**R108.5 Refunds.**

The building official is authorized to refund fees in accordance with Parkville Municipal Code Chapter 500.040, *Building Permit Fees*.

**R108.6 Work commencing before permit issuance.**

Any person who commences work requiring a permit on a building, structure, electrical, gas, mechanical or plumbing system before obtaining the necessary permits shall be subject to additional fees in accordance with Parkville Municipal Code Chapter 500.040, *Building Permit Fees*. Fees for starting work prior to issuance of a permit shall be charged in addition to the required permit and other applicable fees.

**Section R110.3 is amended to read as follows:**

**R110.3 Certificate issued.** After the building official inspects the building or structure and finds no violations of the provisions of this code or other laws that are enforced by the department of Community Development , the building official shall issue a certificate of occupancy which shall be the approved final inspection report.

**Section R 112 is amended to read as follows:**

**Section R112 Appeals.**

**R 112.1 Application for appeal.** Any person directly affected by a decision of the code official or a notice or order issued under this code shall have the right to appeal to the Board of Appeals, provided that a written application for appeal is filed within 20 days after the day the decision, notice or order was served. An application for appeal shall be based on a claim that the true intent of this code or the rules legally adopted there under have been incorrectly interpreted, the provisions of this code do not fully apply, or the requirements of this code are adequately satisfied by other means. The board shall have no authority to waive requirements of this code.

**R 112.2 Membership of board.** The Board of Appeals shall consist of the members of the Board of Zoning and Adjustments of the City of Parkville.

**R 112.3 Procedures.** The Board of Appeals shall following the procedures adopted in Parkville Municipal Code Chapter 400, Section 480.020, *Procedures*.

**R112.4. Administration.** The code official shall take immediate action in accordance with the decision of the Board.

**Section R113.1 is amended to read as follows:**

**R113.1 Unlawful acts.** It shall be unlawful for any person, firm, partnership or corporation, or any architect, builder, contractor, agent, person or corporation employed in connection therewith, to:

Erect, construct, enlarge, alter, repair, remodel, move, improve, remove, convert, demolish, equip, use or occupy prior to passing a final inspection or maintain any building or structure or cause or permit the same to be done without first obtaining a valid, unrevoked building permit and/or temporary certificate of occupancy or certificate of occupancy as provided in this Code.

Enter, occupy, remain or permit or cause any other person to enter, occupy or remain in any building or structure which has been posted as unfit to occupy until such building or structure has been inspected and been issued a certificate of occupancy pursuant to the provisions of the City Building Code.

Remove or deface any order to stop work or to vacate, which is posted upon any premises, building or structure.

Fail, neglect or refuse to obey any subpoena or final order of the Board of Zoning Adjustment or Board of Appeals or violate any other provision of this Code.

**Section R113.4 is amended to read as follows:**

**R113.4 Violations penalties.** Any person, firm, partnership or corporation or any architect, builder, contractor, agent, person or corporation employed in connection therewith who shall violate this Title shall be guilty of a misdemeanor and shall be liable to a fine not exceeding five hundred dollars (\$500.00) and costs or imprisonment for a term not exceeding ninety (90) days or both such fine and imprisonment. Each day such violation shall be permitted to exist shall constitute a separate offense. The owner or owners of any building, structure or premises or part thereof where anything in violation of this Title shall be placed or shall exist and any architect, builder, contractor, agent, person or corporation employed in connection therewith and who have assisted in the commission of any such violation shall be guilty of a separate offense and upon conviction thereof shall be fined as hereinabove provide

**Section R114.1 is amended to read as follows:**

**R114.1 Notice to Owner.** Upon notice from the code official that work on any building or structure is being prosecuted contrary to the provisions of this code or in an unsafe and dangerous manner, such work shall be immediately stopped. The stop work order shall be in writing and shall be given to the owner of the property, or to the owner's agent, to the person doing the work, or posted on the subject property in a conspicuous location. Where an emergency exists, the code official shall not be required to give a written notice prior to stopping the work.

**Section R115 is added to read as follows:**

**R115 Protection of Adjoining Property.** Adjoining public and private property shall be protected from damage during construction, remodeling and demolition work. Protection must be provided for footings, foundations, party walls, chimneys, skylights and roofs. Provisions shall be made to control water run-off and erosion during construction or demolition activities.

**AMENDMENTS TO CHAPTER 3 - BUILDING PLANNING**

**Table R301.2.1 is amended to read as follows:**

**CLIMATIC AND GEOGRAPHIC DESIGN CRITERIA**

ROOF SNOW LOAD (psf)	WIND DESIGN		SEISMIC DESIGN CATEGORY <sup>f</sup>	SUBJECT TO DAMAGE FROM			WINTER DESIGN TEMP <sup>g</sup>	ICE BARRIER UNDERLAYMENT REQUIRED <sup>h</sup>	FLOOD HAZARDS <sup>g</sup>	AIR FREEZING INDEX <sup>k</sup>	MEAN ANNUAL TEMP <sup>j</sup>
	Speed <sup>d</sup> (mph)	Topographic effects <sup>k</sup>		Weathering <sup>a</sup>	Frost line depth <sup>b</sup>	Termite <sup>c</sup>					
20	90	No	A	Severe	36"	Moderate to Heavy	6 F	No	See NFIP Flood Insurance Rate Map	927	55 F

**Section R302.2 is amended to read as follows:**

**R302.2 Townhouses.** Each townhouse shall be considered a separate building and shall be separated by fire-resistance-rated wall assemblies meeting the requirements of Section R302.1 for exterior walls.

**Exception:**

1. A common 2-hour fire-resistance-rated wall assembly tested in accordance with ASTM E 119 or UL 263 is permitted for townhouses if such walls do not contain plumbing or mechanical equipment, ducts or vents in the cavity of the common wall. The wall shall be rated for fire exposure from both sides and shall extend to and be tight against exterior walls and the underside of the roof sheathing. Electrical installations shall be installed in accordance with Chapter 34 through 43. Penetrations of electrical outlet boxes shall be in accordance with Section R302.2.
2. A common 1-hour fire-resistance-rated assembly tested in accordance with ASTM-E 119 or UL 263 is permitted for townhouses equipped with an automatic sprinkler system installed in accordance with Section P2904.

**Section R302.2.4 is amended to read as follows:**

**R302.2.4 Structural independence.**

Each individual townhouse shall be structurally independent.

**Exceptions:**

1. Foundations supporting exterior walls or common walls.
2. Structural roof and wall sheathing from each unit may fasten to the common wall framing.
3. Nonstructural wall and roof coverings.
4. Flashing at termination of roof covering over common wall.
5. Townhouses separated by a common 4-hour fire-resistance-rated wall as provided in Section R302.2.

**Section R303.3 is amended to read as follows:**

**R303.3 Bathrooms.** Bathrooms, water closet compartments and other similar rooms shall be provided with aggregate glazing area in windows of not less than 3 square feet (0.3 m<sup>2</sup>), one-half of which must be openable.

**Exception:** The glazed areas shall not be required where artificial light and a local exhaust system are provided. The minimum local exhaust rates shall be determined in accordance with Section M1507. Exhaust air from the space shall be exhausted directly to the outdoors or to an attic gable vent or ventilated soffit.

**Section R306.5 is added to read as follows:**

**R306.5 New single-family dwellings toilet facilities.** Toilet facilities shall be provided within 500 feet (measured from the property line adjacent to the street for platted subdivisions along the public way) for all new single-family dwellings starting from the time of the first footing inspection until facilities are available in the dwelling. The facilities on the site shall be removed prior to occupancy.

**Section R309 is amended to read as follows:**

**R309.5 Fire sprinklers.** Private garages shall be protected by fire sprinklers where the garage wall has been designed based on Table R302.1(2), Footnote a. and the home owner has opted to purchase a fire sprinkler system for their residence, as per Missouri Revised Statutes 67.281 Sprinklers in garages shall be connected to an automatic sprinkler system that complies with Section P2904. Garage sprinklers shall be residential sprinklers or quick-response sprinklers designed to provide a density of 0.05 gpm/ft<sup>2</sup>. Garage doors shall not be considered obstructions with respect to sprinkler placement.

**Section R313 is amended to read as follows:**

**SECTION R313 AUTOMATIC FIRE SPRINKLER SYSTEMS**

**R313.1 Townhouse automatic fire sprinkler systems.**

As required by Section 67.281 of the Revised Statutes of Missouri and a builder of one-or two Family dwelling or townhouse shall offer to any purchaser on or before entering into purchase contract the option, at the purchaser's cost, to install or equip Fire sprinklers in the dwelling or townhouse.

**Exception:** An automatic residential fire sprinkler system shall not be required when additions or alterations are made to existing townhouses that do not have an automatic residential fire sprinkler system installed.

**R313.1.1 Design and installation.**

Automatic residential fire sprinkler systems for townhouses shall be designed and installed in accordance with Section P2904.

**R313.2 One- and two-family dwellings automatic fire systems.**

As required by Section 67.281 of the Revised Statutes of Missouri and a builder of one-or two Family dwelling or townhouse shall offer to any purchaser on or before entering into purchase contract the option, at the purchaser's cost, to install or equip Fire sprinklers in the dwelling or townhouse.

**Exception:** An automatic residential fire sprinkler system shall not be required for additions or alterations to existing buildings that are not already provided with an automatic residential sprinkler system.

**R313.2.1 Design and installation.**

Automatic residential fire sprinkler systems shall be designed and installed in accordance with Section P2904 or NFPA 13D.

**Section R319.2 is added to read as follows:**

**R319.2 Illumination.** Single-family dwellings shall have the ability to illuminate the address and numbers during the hours of darkness with a power source connected to the house electrical system or other approved source of illumination.

**AMENDMENTS TO CHAPTER 11 - ENERGY EFFICIENCY**

**Table N1102.1.1 is amended to read as follows:**

**Table N1102.1.1 (R402.1.1) Insulation and Fenestration Requirements by Component<sup>a</sup>**

Climate Zone	Fenestration <i>U</i> -factor <sup>b</sup>	Skylight <sup>d</sup> <i>U</i> -factor	Glazed Fenestration SHGC <sup>b</sup>	Ceiling <i>R</i> -value <sup>g</sup>	Wood Frame Wall <i>R</i> -value	Mass Wall <i>R</i> -Value <sup>f</sup>	Floor <i>R</i> -Value	Basement <sup>c</sup> Wall <i>R</i> -value	Slab <sup>d</sup> <i>R</i> -Value & Depth	Crawl Space <sup>c</sup> Wall <i>R</i> -Value
4	0.35	0.55	0.40	49	13	8/13	19 <sup>e</sup>	10/13	NR	10/13

- a. *R*-values are minimums. *U*-factors and SHGC are maximums. When insulation is installed in a cavity which is less than the label or design thickness of the insulation, the installed *R*-value of the insulation shall not be less than the *R*-value specified in the table.
- b. The fenestration *U*-factor column excludes skylights. The SHGC column applies to all glazed fenestration.
- c. "10/13" means R-10 continuous insulation on the interior or exterior of the home or R-13 cavity insulation at the interior of the basement walls.
- d. R-5 shall be added to the required slab edge *R*-values for heated slabs.
- e. Or insulation sufficient to fill the framing cavity, R-19 minimum.
- f. The second *R*-value applies when more than half the insulation is on the interior of the mass wall.
- g. Loose-fill-insulation shall be installed at the rate recommended by the manufacturer's statement "bags per 1,000 square feet." Where the pitch of the roof restricts the "minimum thickness" at the exterior wall line, the insulation shall be blown into the cavity so as to achieve a greater compacted density to a point where the "minimum thickness" can be achieved. As an alternative high-density batts may be installed around the perimeter edge per Section N1102.4.1.1.

**Section N1102.2.8 is deleted.**

**Table N1102.4.1.1 is amended to read as follows:**

**Table N1102.4.1.1 Air Barrier and Insulation Installation**

Component	Criteria
Air barrier and thermal barrier	A continuous air barrier shall be installed in the building envelope. Exterior thermal envelope contains a continuous air barrier. Breaks or joints in the air barrier shall be sealed. Air-permeable insulation shall not be used as sealing material
Ceiling/attic	The air barrier in any dropped ceiling/soffit shall be aligned with the insulation and any gaps in the air barrier sealed. Access opening, dropdown stair or knee wall doors to unconditioned attic spaces shall be sealed.
Windows, skylights and doors	The space between window/door jambs and framing and skylights and framing shall be sealed.

Floors (including above-garage and cantilevered floors)	Insulation shall be installed to maintain permanent contact with underside of subfloor decking. The air barrier shall be installed at any exposed edge of insulation.
Crawl space walls	Where provided in lieu of floor insulation, insulation shall be permanently attached to the crawlspace walls. Exposed earth in unvented crawl spaces shall be covered with a Class I vapor retarder with overlapping joints taped.
Shafts, penetrations	Duct shafts, utility penetrations, and flue shafts opening to exterior or unconditioned space shall be sealed.
Narrow cavities	Batts in narrow cavities shall be cut to fit, or narrow cavities shall be filled by insulation that on installation readily conforms to the available cavity space.
Garage separation	Air sealing shall be provided between the garage and conditioned spaces.
Recessed lighting	Recessed light fixtures installed in the building thermal envelope shall be air tight, IC rated, and sealed to the drywall.
Plumbing and wiring	Batt insulation shall be cut neatly to fit around wiring and plumbing in exterior walls, or insulation that on installation readily conforms to available space shall extend behind piping and wiring.
Shower/tub on exterior wall	Exterior walls adjacent to showers and tubs shall be insulated and the air barrier installed separating them from the showers and tubs.
Electrical/phone box on exterior walls	The air barrier shall be installed behind electrical or communication boxes or air-sealed boxes shall be installed.
HVAC register boots	HVAC register boots that penetrate building thermal envelope shall be sealed to the sub floor or drywall.

**Section N1102.4.1.2 is amended to read as follows:**

**N1102.4.1.2 Testing.** Where required by the Building Official, The building or dwelling unit shall be tested and verified as having an air leakage rate not exceeding five (5) air changes per hour. Testing shall be conducted with a blower door at a pressure of 0.2 inches w.g. (50 Pascal's). Where required by the Building Official, test shall be conducted by a third party. A written report of the results of the test shall be signed by the party conducting the test and provided to the Building Official. Testing shall be performed at any time after creation of all penetrations of the building thermal envelope.

During testing:

1. Exterior windows and stoves doors shall be closed, but not sealed, beyond the intended weather stripping or other infiltration control measures;
2. Dampers including exhaust, intake, makeup air, back-draft and flue dampers shall be closed, but not sealed beyond intended infiltration measures;
3. Interior doors, if installed at the time of the test, shall be open;
4. Exterior doors for continuous ventilation systems and heat recovery ventilators shall be closed and sealed;
5. Heating and cooling systems' if installed at the time of the test, shall be turned off; and
6. Supply and return registers, if installed at the time of the test, shall be fully opened.

**Section N1103.2.1 is amended to read as follows:**

**N1103.2.1 Insulation (Prescriptive).** Supply ducts in attics shall insulate to minimum of R-4.

**Exception:** Ducts or portions thereof located completely inside the *building thermal envelope*.

**N1103.2.2 Sealing (Mandatory).** Ducts, air handlers, and filter boxes shall be sealed. Joints and seams shall comply with Section M1601.4.1 of this Code.

**Exceptions:**

1. Air-impermeable spray foam products shall be permitted to be applied without additional joint seals.
2. Where a duct connection is made that is partially inaccessible, three screws or rivets shall be equally spaced on the exposed portion of the joint so as to prevent a hinge effect.
3. Continuously welded and locking-type longitudinal joints and seams in ducts operating at static pressures less than two inches (2") of water column (500 Pa) pressure classification shall not require additional closure systems.

**Where required by the Code Official, duct tightness shall be verified by either of the following:**

1. Post-construction test: Total leakage shall be less than or equal to 4 cfm (113.3 L/min) per 100 square feet (9.29 m<sup>2</sup>) of conditioned floor area when tested at a pressure differential of 0.1 inches w.g. (25 Pa) across the entire system, including the manufacturer's air handler enclosure. All register boots shall be taped or otherwise sealed during the test.
2. Rough-in test: Total leakage shall be less than or equal to 4 cfm (113.3 L/min) per 100 square feet (9.29 m<sup>2</sup>) of conditioned floor area when tested at a pressure differential of 0.1 inches w.g. (25 Pa) across the system, including the manufacturer's air handler enclosure. All registers shall be taped or otherwise sealed during the test. If the air handler is not installed at the time of the test, total leakage shall be less than or equal to 3 cfm (85 L/min) per 100 square feet (9.29 m<sup>2</sup>) of conditioned floor area.

**Exceptions:**

1. The total leakage test is not required for ducts and air handlers located entirely within the building thermal envelope.
2. On the post-construction test, it is permissible to test for "leakage to the outdoors" versus a "total leakage." Leakage to the outdoors shall be less than or equal to 8 cfm per 100 square feet of conditioned floor area.

**Section N1103.2.3 is hereby deleted in its entirety.**

**Section N1103.2.3 is amended to read as follows:**

**N1103.2.3 Building cavities (Mandatory).**

Building framing cavities shall not be used as supply ducts or plenums. Building cavities used as plenums shall be durably sealed to limit infiltration. The sealing methods between dissimilar materials shall allow for differential expansion and contraction and shall be caulked, gasketed, weather-stripped or otherwise sealed with an air barrier material, suitable film or solid material.

**Section N1103.4.2 is amended to read as follows:**

**N1103.4.2. Hot water pipe insulation (Prescriptive).** Insulation for hot water pipe with a minimum thermal resistance (*R*-Value) of R-3 shall be applied to the following:

1. Piping larger than ¾ inch nominal diameter.
2. Piping serving more than one dwelling unit.
3. Piping located outside the conditioned space.
4. Piping located under a floor slab.
5. Buried piping.
6. Supply and return piping in recirculation systems other than demand recirculation systems.

**Section N1104.1 is amended to read as follows:**

**N1104.1 Lighting Equipment.** Fuel gas systems shall not have a continuous burning pilot.

#### **AMENDMENTS TO CHAPTER 15 - EXHAUST SYSTEMS**

**Section M1502.4.2 is amended to read as follows:**

**M1502.4.2 Duct installation.** Exhaust ducts shall be supported at intervals not to exceed 12 feet (3658 mm) and shall be secured in place. The insert end of the duct shall extend into the adjoining duct or fitting in the direction of airflow. Exhaust duct joints shall be sealed in accordance with Section M1601.4.1. Clothes Dryer Exhaust shall not be mechanically fastened.

#### **AMENDMENTS TO CHAPTER 30 - SANITARY DRAINAGE**

**Section P3001.2.1 is added to read as follows:**

**P3001.2.1 Sewer Depth.** Building sewers that connect to private sewer disposal systems shall be a minimum of 36 inches below finished grade at the point of septic tank connection. Building sewers shall be a minimum of 36 inches below grade.

#### **AMENDMENTS TO CHAPTER 39 - POWER AND LIGHT DISTRIBUTION**

**Section E3902.2 is amended to add the following exception:**

**Exception:** GFCI is not required for a garage door opener if the receptacle is a single dedicated receptacle and not a duplex receptacle.

**Section E3902.5 is amended to add the following exception:**

**Exception:** GFCI is not required for a sump pump if the receptacle is a single dedicated receptacle and not a duplex receptacle.

**Section E3902.12 is amended to read as follows:**

**E3902.12 Arc-fault circuit-interrupter protection.** All branch circuits that supply 120-volt, single-phase, 15- and 20-ampere outlets installed in bedrooms -and similar rooms or areas shall be protected by a combination type arc-fault circuit interrupter installed to provide protection of the branch circuit.

#### **AMENDMENTS TO CHAPTER 40 - DEVICES AND LUMINARIES**

**Section E4002.14 is hereby deleted in its entirety.**



## Section Eighteen

### Building Permit Fees

Total Valuation	Fee
\$1 to \$500	\$24
\$ 501 to \$2,000	\$24 for the first \$500; plus \$3 for each additional \$100 or fraction thereof, to and including \$2,000
\$2,001 to \$40,000	\$69 for the first \$2,000; plus \$11 for each additional \$1,000 or fraction thereof, to and including \$40,000
\$40,001 to \$100,000	\$487 for the first \$40,000; plus \$9 for each additional \$1,000.00 or fraction thereof, to and including \$100,000
\$100,001 to \$500,000	\$1,027 for the first \$100,000; plus \$7 for each additional \$1,000 or fraction thereof, to and including \$500,000
\$500,001 to \$1,000,000	\$3,827 for the first \$500,000; plus \$5 for each additional \$1,000.00, or fraction thereof, to and including \$1,000,000
\$1,000,001 to \$5,000,000	\$6327 for the first \$1,000,000; plus \$3 for each additional \$1,000 or fraction thereof, to and including \$5,000,000
\$5,000,000 and over	\$18,327 for the first \$5,000,000; plus \$1 for each additional \$1,000 or fraction thereof

**Other Inspections and Fees:**

1. Inspections outside of normal business hours.....\$47.00 per hour\*  
(minimum charge – two hours)
2. Reinspection fees assessed under provision of Section 305.8.....\$47.00 per hour\*
3. Inspections for which no fee is specifically indicated.....\$47.00 per hour\*  
(minimum charge – one-half hour)
4. Additional plan review required by changes, additions or revisions to plans.....\$47.00 per hour\*  
(minimum charge – one-half hour)
5. For use of outside consultants for plan checking and inspections, or both.....Actual costs\*\*

\*Or the total hourly cost to the jurisdiction, whichever is the greatest. This cost shall include supervision, overhead, equipment, hourly wages and fringe benefits of the employees involved.

\*\*Actual costs include administrative and overhead costs.

# Building Permit, Plan Review and Inspection Fees

## Municipal Code Chapter 500

**Building Permit Fees**

- One- and two-family dwellings ..... See 2012 International Residential Code for One- and Two-Family Dwellings, Appendix L, Permit Fees
- Other residential and non-residential See 1997 Uniform Administrative Code, Tables 3-A, 3-B, 3-C and 3-D.

**Plan Review**

- One- and two-family dwellings
- New residence construction ..... \$100
- Other ..... 25% of permit. \$25 min. \$100 max

### Electrical Permit Fees

**Permit Issuance Fee**

- 1. For the issuance of each electrical permit.....\$23.50
- 2. For the issuing of each supplemental permit for which the original permit has not expired, been canceled, or finalized.....7.25

System Fee Schedule

*(Note: the following do not include permit-issuing fee.)*

**1. New Residential Buildings**

The following fees shall include all wiring and electrical equipment in or on each building, or other electrical equipment on the same premises constructed at the same time.

**Multi-family.** For new multi-family buildings (apartments and condominiums) having three or more dwelling units constructed at the same time, not including the area of garages, carports and accessory buildings, per square foot (0.09m<sup>2</sup>).....0.050

**Single- and two-family.** For new single- and two-family residential buildings constructed at the same time and not including the area of garages, carports and accessory buildings, per square foot (0.09m<sup>2</sup>).....0.056

For other types of residential occupancies and for alterations, additions and modifications to existing residential buildings, use the Unit Fee Schedule.

**2. Private Swimming Pools**

For new private, in-ground swimming pools for single-family and multi-family occupancies, including a complete system of necessary branch circuit wiring, bonding, grounding, underwater lighting, water pumping and other similar electrical equipment directly related to the operation of a swimming pool, each pool.....49.50

**3. Carnivals and Circuses**

Carnivals, circuses, or other traveling shows or exhibitions utilizing transportable-type rides, booths, displays and attractions.  
For electrical generators and electrically driven rides, each.....23.50

For mechanically driven rides and walk-through attractions or displays having electric lighting, each.....7.25

For a system of area and booth lighting, each.....7.25

For permanently installed rides, booths, displays and attractions, use the Unit Fee Schedule.

**4. Temporary Power Service**

For a temporary service pole or pedestal, including all pole or pedestal-mounted receptacle outlets and appurtenances, each.....23.50

For a temporary distribution system, temporary lighting and receptacle outlets for construction sites, decorative lights, Christmas tree sales lots, fireworks stands, etc., each.....12.30

**Unit Fee Schedule**

*(Note: the following do not include permit-issuing fee.)*

**1. Receptacle, Switch and Light Outlets**

For receptacle, switch, light or other outlets at which current is used or controlled, except services, feeders and meters:

First 20 fixtures, each. ....1.10  
 Additional fixtures, each. .... .73

**Note:** For multi-outlet assemblies, each 5 feet (1524 mm) or fraction thereof may be considered as one outlet.

**2. Lighting Fixtures**

For lighting fixtures, sockets or other lamp-holding devices:

First 20 fixtures, each.....1.10  
 Additional fixtures, each..... .73

For pole or platform-mounted lighting fixtures, each..... 1.10

For theatrical-type lighting fixtures or assemblies, each..... 1.10

**3. Residential Appliances**

For fixed residential appliances or receptacle outlets for same, including wall-mounted electric ovens; counter-mounted cooking tops; electric ranges; self-contained room, console or through-wall air conditioners; space heaters; food waste grinders; dishwashers; washing machines; water heaters; clothes dryers; or other motor- operated appliances not exceeding 1 (one) horsepower (746 W) in rating, each..... 4.75

**Note:** For other types of air conditioners and other motor-driven appliances having larger electrical ratings, see Power Apparatus.

**4. Nonresidential Appliances**

For nonresidential appliances and self-contained factory-wired, non-residential appliances not exceeding 1 (one) horsepower (HP), kilowatt (KW) or kilovolt-ampere (KVA), in rating, including medical and dental devices; food, beverage

and ice-cream cabinets; illuminated show cases; drinking fountains; vending machines; laundry machines; or other similar types of equipment, each.....4.75

**Note:** For other types of air conditioners and other motor-driven appliances having larger electrical ratings, see Power Apparatus.

**5. Power Apparatus**

For motors, generators, transformers, rectifiers, synchronous converters, capacitors, industrial heating, air conditioners and heat pumps, cooking or baking equipment and other apparatus as follows:

Rating in horsepower (HP), kilowatts (KW), kilovolt-amperes- reactive (KVAR):

Up to and including 1, each.....	4.75
Over 1 and not over 10, each.....	12.30
Over 10 and not over 50, each.....	24.60
Over 50 and not over 100, each.....	49.50
Over 100, each.....	74.50

**Notes:**

1. For equipment or appliances having more than one motor, transformer, heater, etc., the sum of the combined ratings may be used.
2. These fees include all switches, circuit breakers, contactors, thermostats, relays and other directly related control equipment.

**6. Busways**

For trolley and plug-in-type busways, each 100 feet (30 480 mm) or fraction thereof.....7.25

**Note:** An additional fee is required for lighting fixtures, motors and other appliances that are connected to trolley and plug-in type busways. A fee is not required for portable tools.

**7. Signs, Outline Lighting and Marquees**

For signs, outline lighting systems or marquees supplied from one branch circuit, each.....24.60  
For additional branch circuits within the same sign, outline lighting system or marquee, each.....4.75

**8. Services**

For services of 600 volts or less and not over 200 amperes in rating, each.....30.50  
For services of 600 volts or less and over 200 amperes to 1,000 amperes, each....  
....62.15  
Services over 600 volts or over 1,000 amperes in rating, each.....124.30

**9. Miscellaneous Apparatus, Conduits and Conductors**

For electrical apparatus, conduits and conductors for which a permit is required but for which no fee is herein set forth.....18.20

**Note:** This fee is not applicable when a fee is paid for one or more services, outlets, fixtures, appliances, power apparatus, busways, signs or other equipment.

**Other Inspections and Fees:**

1. Inspections outside of normal business hours, per hour (minimum charge – two hours).....49.50\*
2. Reinspection fees assessed under provisions of Section 305.8, per inspection.....49.50\*
3. Inspections for which no fee is specifically indicated, per hour (minimum charge – one half hour).....49.50\*
4. Additional plan review required by changes, additions or revisions to plans or to plans for which an initial review has been completed (minimum charge- one half hour).....49.50\*

\*Or the total hourly cost to the jurisdiction, whichever is the greatest. This cost shall include supervision, overhead, equipment, hourly wages and fringe benefits of the employees involved.

## Mechanical Permit Fees

### Permit Issuance Fee and Heaters

1. For the issuance of each mechanical permit..... \$23.50
2. For issuing each supplemental permit for which the original permit has not expired, been canceled or finalized .....7.25

### Unit Fee Schedule

*(Note: The following do not include permit issuing fee.)*

#### 1. **Furnaces**

- For the installation or relocation of each forced-air or gravity-type furnace or burner, including ducts and vents attached to such appliance, up to and including 100,000 Btu/h (29.3 kW).....14.80
- For the installation or relocation of each forced-air or gravity-type furnace or burner, including ducts and vents attached to such appliance, over 100,000 Btu/h (29.3 kW). .....18.20
- For the installation or relocation of each floor furnace, including vent.....14.80
- For the installation or relocation of each suspended heater, recessed wall heater or floor-mounted unit heater.....14.80

#### 2. **Appliance Vents**

- For the installation, relocation or replacement of each appliance vent installed and not included in an appliance permit.....7.25

#### 3. **Repairs or Additions**

- For the repair of, alteration of, or addition to each heating appliance, refrigeration unit, cooling unit, absorption unit, or each heating, cooling, absorption or evaporative cooling system, including installation of controls regulated by the Mechanical Code.....13.70

#### 4. **Boilers, Compressors and Absorption Systems**

- For the installation or relocation of each boiler or compressor to and including 3 horsepower (10.6 kW), or each absorption system to and including 100,000 Btu/h (29.3 kW).....14.70

For the installation or relocation of each boiler or compressor over 3 horsepower (10.6 kW) to and including 15 horsepower (52.7 kW), or each absorption system over 100,000 Btu/h (29.3 kW) to and including 500,000 Btu/h (146.6 kW).....27.15

For the installation or relocation of each boiler or compressor over 15 horsepower (52.7 kW) to and including 30 horsepower (105.5 kW), or each absorption system over 500,000 Btu/h (46.6 kW) to and including 1,000,000 Btu/h (293.1 kW).....37.25

For the installation or relocation of each boiler or compressor over 30 horsepower (105.5 kW) to and including 50 horsepower (176 kW), or each absorption system over 1,000,000 Btu/h (293.1 kW) to and including 1,750,000 Btu/h (512.9 kW).....55.45

For the installation or relocation of each boiler or compressor over 50 horsepower (176 kW), or each absorption system over 1,750,000 Btu/h (512.9 kW).....92.65

**5. Air Handlers**

For each air-handling unit to and including 10,000 cubic feet per minute (cfm) (4719 L/s), including ducts attached thereto.....10.65

For each air-handling unit over 10,000 cfm (4719 L/s).....18.10

**Note:** This fee does not apply to an air-handling unit which is a portion of a factory-assembled appliance, cooling unit, evaporative cooler or absorption unit for which a permit is required elsewhere in the Mechanical Code.

**6. Evaporative Coolers**

For each evaporative cooler other than portable type.....10.65

**7. Ventilation and Exhaust**

For each ventilation fan connected to a single duct.....7.25

For each ventilation system which is not a portion of any heating or air-conditioning system authorized by a permit.....10.65

For the installation of each hood which is served by mechanical exhaust, including the ducts for such hood.....10.65

**8. Incinerators**

For the installation or relocation of each domestic-type incinerator .....18.20

For the installation or relocation of each commercial or industrial-type incinerator .....14.50

**9. Miscellaneous**

For each appliance or piece of equipment regulated by the Mechanical Code but not classed in other appliance categories, or for which another fee is listed in the table.....10.65

**Other Inspections and Fees:**

1. Inspections outside of normal business hours, per hour (minimum charge—two hours).....\$49.50\*

2. Reinspection fees assessed under provisions of Section 305.8, per inspection.....\$49.50  
\*
3. Inspections for which no fee is specifically indicated, per hour (minimum charge – one-half hour)..... \$49.50\*
4. Additional plan review required by changes, additions or revisions to plans or to plans for which an initial review has been completed (minimum charge – one-half hour)..... \$49.50\*

\*Or the total hourly cost to the jurisdiction, whichever is greatest. This cost shall include supervision, overhead, equipment, hourly wages and fringe benefits of the employees involved.

## Plumbing Permit Fees

### Permit Issuance Fee

1. For the issuance of each plumbing permit.....\$23.50
2. For issuing each supplemental permit for which the original permit has not expired, been canceled or finalized.....7.25

### Unit Fee Schedule

*(Note: The following do not include permit-issuing fee.)*

#### 1. Fixtures and Vents

- For each plumbing fixture or trap or set of fixtures on one tap (including water, drainage piping and backflow protection thereof).....9.80
- For repair or alteration of drainage or vent piping, each fixture.....4.75

#### 2. Sewers, Disposal Systems and Interceptors

- For each building sewer and each trailer park sewer.....24.65
- For each cesspool.....
- 37.25For each private sewage disposal system .....74.50
- For each industrial waste pretreatment interceptor, including its trap and vent, except kitchen-type grease interceptors functioning as fixture traps.....19.90
- Rainwater systems – per drain (inside building).....9.80

#### 3. Water Piping and Water Heaters

- For installation, alteration, or repair of water piping or water-treating equipment, or both, each..... 4.75
- For each water heater including vent.....12.30
- For vents only, see Table 3-C.

#### 4. Gas Piping Systems

- For each gas piping system of one to five outlets.....6.15
- For each additional outlet over five, each.....1.10

#### 5. Lawn Sprinklers, Vacuum Breakers and Backflow Protection Devices

- For each lawn sprinkler system on any one meter, including backflow protection devices thereof.....14.80
- For atmospheric-type vacuum breakers or backflow protection devices not included in Item 1:

1 to 5 devices.....	12.30
Over 5 devices, each.....	2.25
For each backflow-protection device other than atmospheric-type vacuum breakers:	
2 inches (50.8 mm) and smaller.....	12.30
Over 2 inches (50.8 m),,.....	24.65

**6. Swimming Pools**

For each swimming pool or spa:	
Public pool.....	91.25
Public spa.. ..	60.75
Private pool.....	60.75
Private spa.. ..	30.25

**7. Miscellaneous**

For each appliance or piece of equipment regulated by the Plumbing Code but not classed in other appliance categories, or for which no other fee is listed in this code .....	9.80
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**8. Four classes of sewer tap fees**

1. For single-family residential service. A sewer tap fee of \$1,500 and sewer impact fee of \$1,400 shall be charged for a single-family residential sewer permit. When the payment of the lump sum of \$2,900 would work a hardship on the property owner, the single-family residential sewer tap fee may be paid in monthly installments of \$50 with the approval of the City Administrator. This monthly payment provision shall not apply to new construction.
2. For commercial service. A sewer tap fee of \$1,500 and a sewer impact fee of \$1,400 shall be charged for a commercial sewer connection if estimated daily sewerage quantities are 1,000 gallons or less according to Department of Natural Resource guidelines. If estimated daily sewerage quantities are more than 1,000 gallons per day, an additional \$150 per 100 gallons estimated shall be charged.
3. For Industrial service. A sewer tap fee of \$1,500 and sewer impact fee of \$1,400 shall be charged for industrial service if the estimated daily sewerage guidelines are 1,000 gallons or less based on Department of Natural Resources guidelines. If estimated daily sewerage quantities are more than 1,000 gallons per day, an additional \$150 per 100 gallons estimated shall be charged.
4. For multi-family dwelling units and/or apartments. A sewer tap fee of \$1,500 and sewer impact fee of \$1,400 per individual living unit shall be charged.

**Other Inspections and Fees:**

1. Inspections outside of normal business hours, per hour (minimum charge – two hours).....49.50\*
2. Reinspection fees assessed under provisions of Section 305.8, per inspection.....49.50\*
3. Inspections for which no fee is specifically indicated, per hour (minimum charge – one-half hour).....49.50\*
4. Additional plan review required by changes, additions or revisions to plans or to plans for which an initial review has been completed (minimum charge – one-half hour).....49.50\*

\*Or the total hourly cost to the jurisdiction, whichever is the greatest. This cost shall include supervision, overhead, equipment, hourly wages, and fringe benefits of the employees involved.

## Grading Permit Fees

**General.** Fees shall be assessed in accordance with the provisions of this Section, based on the area of the excavation or fill. The fees established in this Section include plan review fees, issuance fees, and all necessary inspections by the City.

### *Grading Permit Fee Schedule*

1 - 10,000 Sq. ft.....	\$25.00
10,001 - 50,000 Sq. ft.....	\$40.00
50,001 - 100,000 Sq. ft.....	\$55.00
100,001 or more Sq. ft.....	\$75.00

The fee for a grading permit authorizing additional work to that under a valid permit shall be the difference between the fees paid for the original permit and the fee shown for the entire project.

### **Other Inspections and Fees:**

1. Inspection outside of normal business hours, per hour (minimum charge – two hours)..... 50.50\*
2. Reinspection fees assessed under provisions of Section 308.5, per inspection .....50.50\*
3. Inspections for which no fee is specifically indicated, per hour (minimum charge – one-half hour).....50.50\*

\*Or the total hourly cost to the jurisdiction, whichever is the greatest. This cost shall include supervision, overhead, equipment, hourly wages and fringe benefits of the employees involved.

## Demolition Permit Fees

**General.** Fees shall be based on valuation of work per Building Permit Fee Table. See the Demolition Permit information sheet in Section Five, page 8 of the Construction Guidelines for Commercial Projects.