City of Pevely

Residential

Deck Handout

City of Pevely
401 Main Street
Pevely, Mo. 63070
636-475-4452

Updated: June 2011

THIS MEMORANDEUM IS A GENERAL, BRIEF STATEMENT FOR THE CONVENIENCE OF THE BUILDERS, ARCHITECTS AND OTHER INTERESTED PERSONS. FULL PROVISIONS ARE DECLARED TO BE THE CITY OF PEVELY CODE.

Application for Deck building permit

1) A permit application must be completely filled out and submitted to the City of Pevely Building Department. This application must include the address location where the deck is to be built, applicant's name(s), a drawing of the proposed deck (also indicate on the drawing the distance from property lines or street) and an estimated cost of the project.

2) A minimum fee of $30.00 shall be charged for the permit. This is in accordance with The Pevely Municipal Code, Title V, Article II, Section 500.060 (D).

3) All fees must be paid prior to the permit being issued or inspection made. All monies can be paid by mail, or in person at Pevely City Hall.

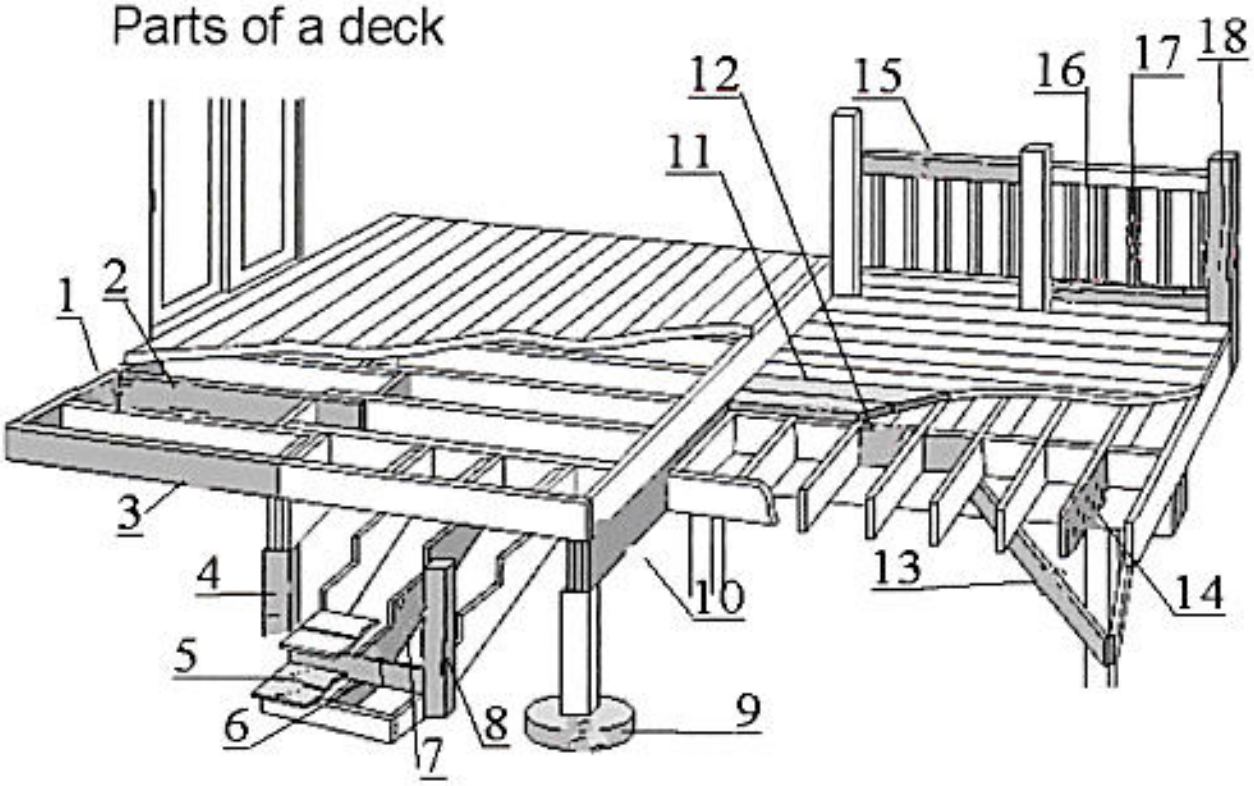
4) If the deck will require footings or piers to be set and poured (see Page 8), an inspection will be called for BEFORE any concrete is poured to insure proper depth and placement of footings. A minimum of **24 HOURS** notice must be given to insure proper scheduling of the inspector. After approval of the footings, the concrete can be poured.

5) After the deck is completed, a FINAL inspection will be required. This will allow us to close out the permit and insure there are no predications.

6) During the inspection, if any predications/code violations are observed, the inspectors will discuss the nature of the violation(s) and leave a copy of the inspection report at the property.

7) After all predications/code violations are corrected; the property owner or agent must contact the City of Pevely Building Department to schedule a re-inspection. As noted above, 24 hours notice must be given.

8) All deck permits shall expire after SIX (6) months.



1) Ledger Board
2) Floor Joist
3) Rim Joist
4) Foundation Post
5) Stair Tread
6) Stair Riser
7) Stair Stringer
8) Railing Post
9) Footing/Pier
10) Beam
11) Deck Boards
12) Blocking
13) Bracing
14) Cantilever
15) Railing Cap
16) Railing Shoe
17) Baluster
18) Guard Rail Post

USING THE FOLLOWING TABLES TO HELP YOU PLAN YOUR DECK

Let's say that your deck will extend 8 feet from your house and will be 14 feet long. In this example, the deck will only by 2 feet high. If it is to be just above ground level, there is little need for a railing. However, decks over 30 inches and higher call for a sturdy railing.

Table 1 shows the appropriate beam size. For example, the distance between the house and the beam is 8 feet. Using (2) 2 x 12's as your beam members allows a span of 7 feet between posts, a convenient figure for a deck 14 feet long. A beam can be built up from 2 smaller pieces either nailed together or placed a few inches apart on either side of a post. Be sure you have a post under any joints in your beams.

To calculate the post size needed, multiply the beam spacing, in this example 8 feet, by the post spacing, 7 feet. This gives you the load area of 56 Square Feet. Refer to **Table 2** to see that in our example, for a load area of less than 72 sq. feet and a post height less than 6 feet, a 4 x 4 post is adequate.

Decking in this example will be 2 x 6 boards, laid flat. **Table 3** shows the safe span for decking.

Now refer to **Table 4**. As in our example our joists must span the 8 feet between the house and the outer beam. That can be achieved with 2 x 8 joists spaced 24 inches apart. To avoid any springiness in our deck, however, it should be designed with joists 16 inches apart.

If a railing is desired, refer to **Table 5** to determine the proper post sizes and spacing requirements. The space between the balusters is specified to be no more than 4 inches apart to be sure the small heads of children cannot get stuck between them.

Required Deck Beam Sizing (Table 1)

Length of Span (FT.)	Spacing Between Posts (FT.)						
	4	**5**	**6**	**7**	**8**	**9**	**10**
6	(2) 2 x 8s	(2) 2 x 8s	(2) 2 x 8s	(2) 2 x 10s	(2) 2 x 10s	(2) 2 x 10s	(2) 2 x12s
7	(2) 2 x 10s	(2) 2 x 10s	(2) 2 x 10s	(2) 2 x 10s	(2) 2 x 10s	(2) 2 x12s	(2) 2 x12s
8	(2) 2 x 10s	(2) 2 x 10s	(2) 2 x 10s	(2) 2 x12s	(2) 2 x12s	(2) 2 x12s	(3) 2x12s
9	(2) 2 x 10s	(2) 2 x 10s	(2) 2 x12s	(2) 2 x12s	(2) 2 x12s	(3) 2x12s	See Note
10	(2) 2 x 10s	(2) 2 x12s	(2) 2 x12s	(3) 2x12s	(3) 2x12s	See Note	See Note
11	(2) 2 x12s	(2) 2 x12s	(3) 2x12s	(3) 2x12s	See Note	See Note	See Note
12	(2) 2 x12s	(3) 2x12s	(3) 2x12s	(3) 2x12s	See Note	See Note	See Note

NOTE: At this spacing, beams LARGER than 2" x 12" are recommended!

Minimum Post Sizes (Table 2)

Height (ft)	Load Area (sq. ft.) = Beam Spacing x Post Spacing				
	48	**72**	**96**	**120**	**144**
up to 6	4x4	4x4	6x6	6x6	6x6
up to 8	6x6	6x6	6x6	6x6	6x6

Vertical loads figured as concentric along axis. No lateral loads considered

Recommended Spans For Spaced Deck Boards (Table 3)

	SPANS IN INCHES				
	Boards Laid FLAT				Boards Laid On EDGE
Board size	5/4 x 4	5/4 x 6	2 x 4	2 x 6	2 x 4
On Center	16"	16" / 24" **	16"	16" / 24" **	48"

** Although 24 inches is a safe span, undesirable deflection or springiness may occur

Maximum Allowable Spans For Deck Joists (Table 4)

Joist Size (inches)	Joist Spacing 16	24
2 x 6	9'-9"	7'-11"
2 x 8	12'-10"	10'-6"
2 x 10	16'-5"	13'-4"

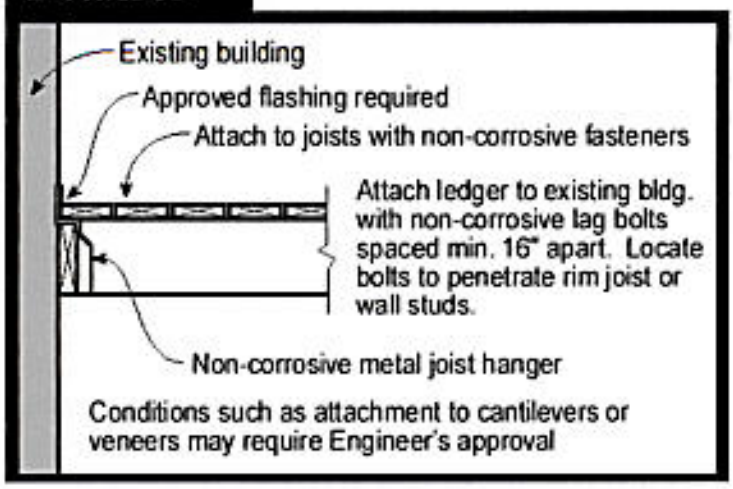
Railing Sizing (Table 5)

Distance between Posts (Feet)	Post Size (Inches)	Cap Size (Inches)
2' - 3'	2 x 4	2 x 4
3' - 4'	2 x 4, 4 x 4	2 x 4, 2 x 6
4' - 6'	2 x 6, 4 x 4	2 x 6

Side rails can be nominal 1" or 2" lumber of varying widths

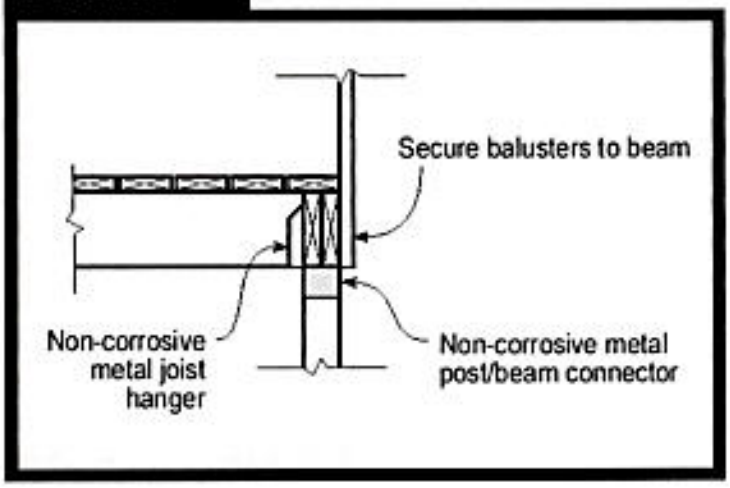
Above Tables are based on lumber with 1200 psi bearing stress rating and a live load of 40 psi.

Detail A



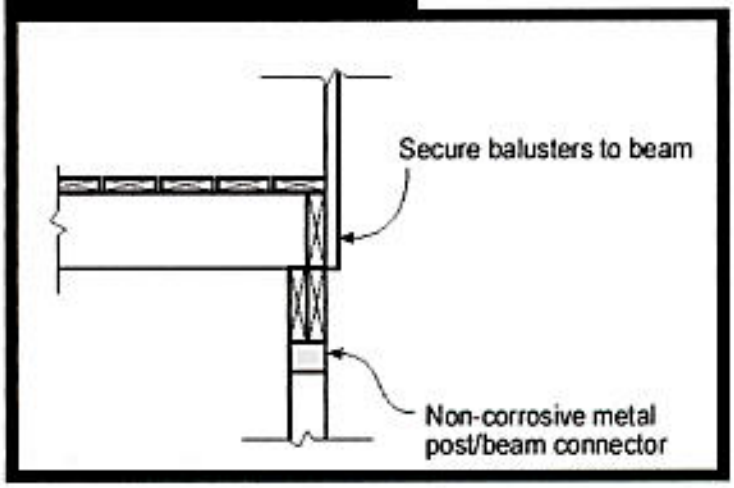
Detail "A" shows the proper method of attaching the ledger board to the side of an existing building and attaching the joists via approved metal hangers.

Detail B



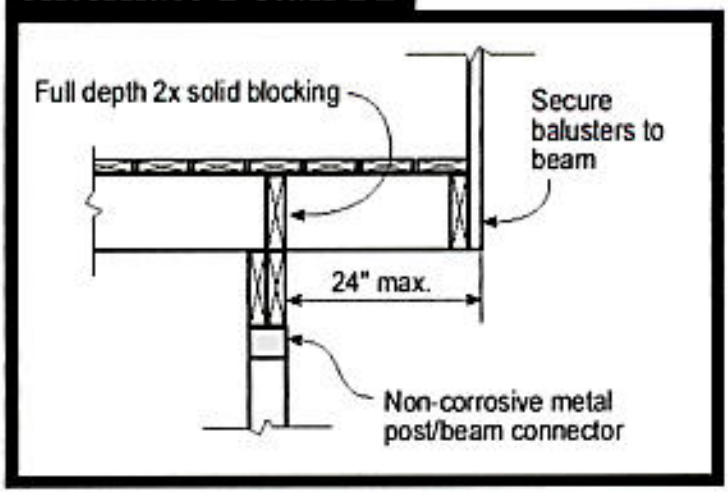
Detail "B" shows the proper method for attaching the opposite end of your joists to the rim joist with approved metal hangers.

Alternate Detail B1



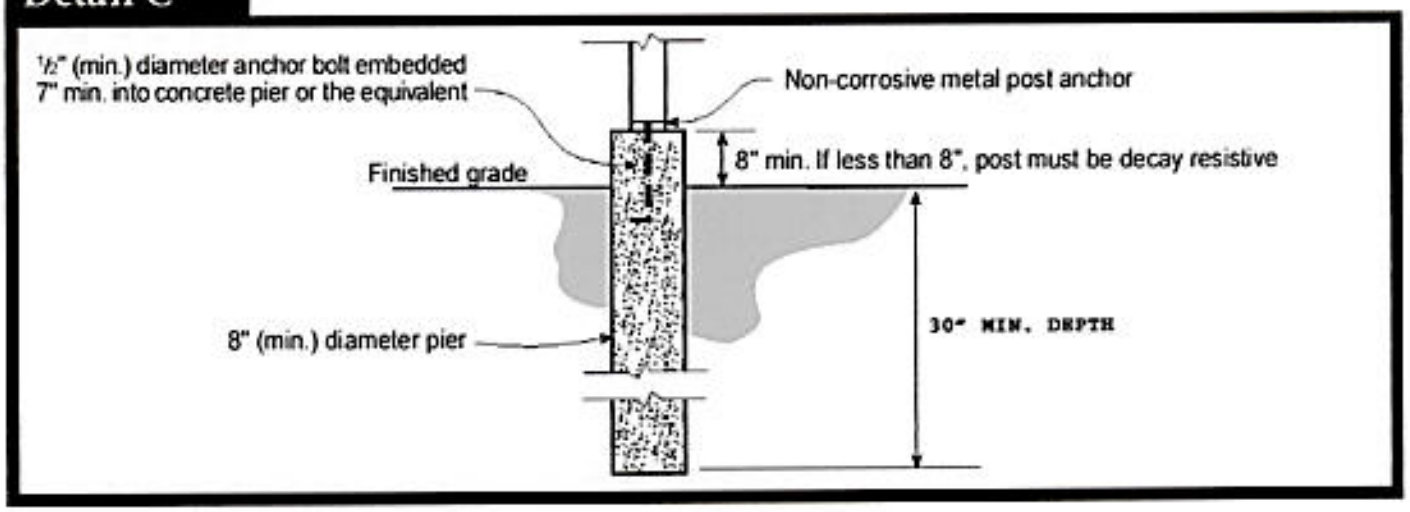
Alt. Detail "B1" shows how to attach the joists to the deck beam without metal joist hangers.

Alternate Detail B2



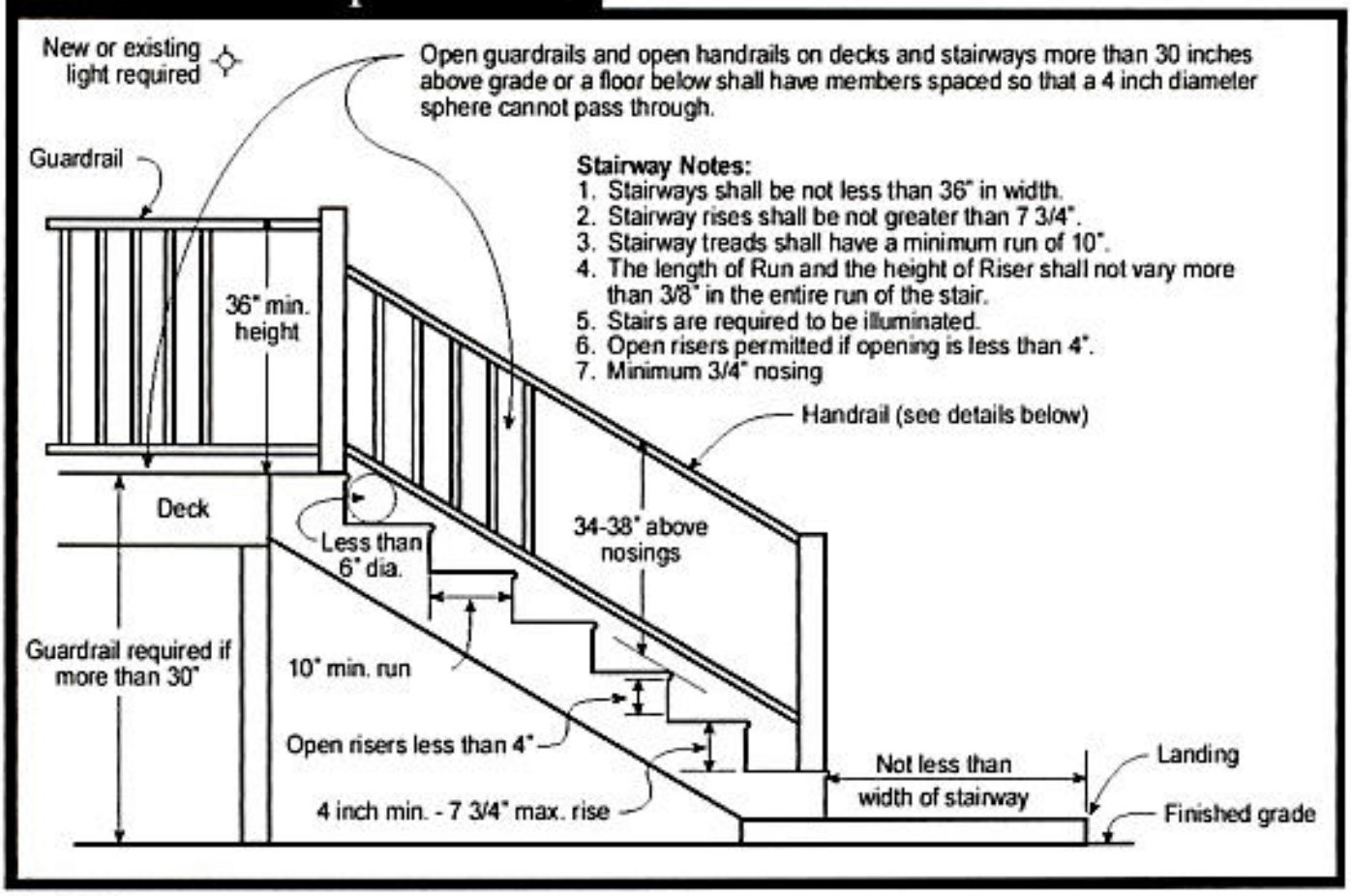
Alt. Detail "B2" shows the proper method of attaching the floor joists in a cantilevered set up. Please note that a 24 inch overhang is the maximum allowed.

Detail C



Detail "C" shows the proper way to set concrete piers to support the deck posts. The depth of the hole is critical since the local freeze/frost depth for the St. Louis Area is 30". Set to shallow, the piers could rise in cold weather. Before concrete can be poured, please contact the Building Department to schedule an inspection.

Stair & Handrail Specifications



Handrail Notes:
1. Handrails shall be continuous on at least one side of stairs with 2 or more risers.
2. Handrails shall be placed not less than 34 inches nor more than 38 inches above stair nosings.
3. The handgrip portion of handrails shall be not less than 1-1/4 inches nor more than 2 1/4 inches in circular cross section.
4. Handrails shall be placed not less than 1-1/2 inches from any wall or other surface.

Please read this section carefully if you are building stairs on your deck. These specifications are applicable to all stairways that you build, interior or exterior.

On the following page, you will find graph paper that can be used to sketch you deck plans for submission. Deck plans DO NOT have to be professionally drawn, just understandable to you and the Building Inspector! Submit this drawing along with the completed permit application and the site plan for review by the Code Enforcement Officer.

If you have any questions about this handout, planning or building your deck, please call the Pevely Building Department.

Name: _____ Address: _____ Permit# _____

APPLICATION FOR PLAN EXAMINATION AND BUILDING PERMIT
CITY OF PEVELY
301 MAIN STREET

636-475-4452 PEVELY, MO. 63070 636-475-4116 (FAX)

Location of Building

AT (LOCATION) _____ ZONING _____

BETWEEN _____ (CROSS STREET) AND _____ (CROSS STREET)

SUBDIVISION _____ LOT _____ BLK _____ LOT SIZE _____

AMEREN/UE PREMISE NUMBER _____

IDENTIFICATION

OWNER

NAME: _____ ADDRESS: _____

CITY _____ STATE _____ ZIP CODE: _____ TELEPHONE: _____ CELL PHONE: _____

CONTRACTOR

NAME: _____ ADDRESS: _____

CITY _____ STATE _____ ZIP CODE: _____ TELEPHONE: _____ CELL PHONE: _____

ARCHITECT OR ENGINEER

NAME: _____ ADDRESS: _____

CITY _____ STATE _____ ZIP CODE: _____ TELEPHONE: _____ CELL PHONE: _____

TYPE AND COST OF BUILDING

TYPE OF IMPROVEMENT

[] New Building
[] Addition
[] Alteration/Remodel
[] Repair/Replacement _____
[] Wrecking
[] Moving/Relocating
[] Install Deck/Patio
[] Install Pool [] Install Shed
[] Install Fence [] Driveway

PROPOSED USE RESIDENTIAL

[] Single Family
[] Duplex
[] Multi-Family # Units_____
[] Garage [] Carport
[] Other: _____

_____

PROPOSED USE COMMERCIAL/INDUSTRIAL

[] Commercial
- [] Church
- [] Service Station
- [] Store/Mercantile
- [] Office/Bank
- [] Professional Use
- [] Educational

[] Other: _____

[] Industrial (Type of Business)
_____

_____

COST

Cost of Improvement: $_____

* Items to be installed, but not included in cost of improvement.

* Electrical: $_____

* Plumbing: $_____

* Heat/Air Cond: $_____

* Other: $_____

TOTAL COST: $_____

CHARACTERISTICS OF BUILDING

PRINCIPAL TYPE OF FRAME

[] Masonry [] Wood Frame [] Structural Steel [] Reinforced Concrete [] Other _____

PRINCIPAL TYPE OF HEATING FUEL/MECHANICAL

[] Gas [] Oil [] Electricity [] Coal [] Other _____ [] Central Air Conditioning [] Elevator

BUILDING DIMENSIONS

Number of Stories _____

Total Square Feet of floor area: _____

Total Land Area in Square Feet: _____

RESIDENTIAL ONLY

Number of Bedrooms _____

Number of Bathrooms: Full _____

Partial _____

NUMBER OF PARKING SPACES

Enclosed _____

Outdoors _____

SITE OR PLOT PLAN

(FOR APPLICANT USE)

VALIDATION

Building Permit Number _____

Occupancy Fee: $_____

Water Tap Fee: $_____

Sewer Tap Fee: $_____

Building Permit Fee: $_____

Deposit Fee: $_____

Total Permit Fee: $_____

Use Group: _____

Fire Grading: _____

Live Loading: _____

Occupancy Load: _____

Approved By: _____

Date: _____