



BASEMENT REMODEL



PERMIT PROCESS

Due to the uniqueness of each project, additional information may be required. The information provided is to help guide you through the permit process. It is the responsibility of the property owner and/or designee to ensure that a permit has been secured prior to commencing any work and that all required inspections are approved.

A basement remodel includes adding or modifying electrical, plumbing or HVAC within the basement or adding new walls.

Step 1: Permit Application Submittal

- **Permit application must include the project cost, completed contractor and signed** – www.vbg.org/PA
- **Copy of proposal** with homeowner's signature
If homeowner is doing the work, give a market value of the project (materials and labor) on the application.
- **Contractor Registration:** www.vbg.org/contractor
All contractors must be registered in the Village of Buffalo Grove. Include the plumber's letter of intent copy with any plumbing work, If homeowner is qualified and doing the project work, fill out the [homeowner affidavit form](#).
- **Complete Combustion Air Calculation Worksheet** ([HERE](#)).
- **Submit two copies of the Construction Drawings** (1/4 inch=1 foot) that include the following information:
 - A floor plan of the entire basement that identifies each room and work being completed.
 - Indicate finished ceiling height (min. 7'-0" in habitable spaces and min. 6'-4" at beams, ducts, and other obstructions.)
 - For all new stairs, indicate headroom (min. 6'-8" measured vertically from the sloped plane adjoining the tread), handrail height (located 34" - 38" from tread nosings), stair width (min. 36" wide), riser height (max. 7 3/4") and tread depth (min. 10" measured from a right angle between vertical planes of the foremost projection of adjacent treads).
 - If plumbing work is being done, provide a plumbing riser diagram for water, waste and vent lines, including sizes and materials.
 - Electrical drawings to include electrical service size, available circuits and number and size of new electrical circuits. Also include the location of new and existing switches, lighting, and receptacles. Show the location of the service panel.
 - Mechanical drawings showing the location of new or existing supply air and return air ducts. Provide information for combustion air requirements for enclosed furnace room based on input BTU's for all gas appliances.
 - Indicate bath exhaust, if applicable, to be vented to outdoor air.
 - Show location(s) of smoke carbon detector(s) where they must be a 110V battery backup.
 - **Complete the Homeowner Notification Form for Building Code Smoke and CO2 Detector Upgrade** ([HERE](#))
The carbon smoke detector is a life safety requirement that has been in place for over 20 years and requires that all homes be equipped with hard wired, inter-connected, battery backup smoke detectors located inside each bedroom; one in hallways within 15 feet of all bedrooms and one on each floor including basements and finished attics. This requirement needs to be met whenever there is any home remodel/alteration, repair or addition that requires a permit to be issued. The notification form needs to be read and signed by not only the homeowner and the general contractor, but also the electrical contractor, where all acknowledge and comprehend this requirement, thereby accepting the minimum requirements of the code will be met. (Note: Battery only operated units do not meet this code requirement.)
 - **Egress/Emergency Escape & Rescue Opening (EERO):** At least one window from all bedrooms must have a minimum clear opening of 5.7 sq. ft. for basement bedrooms. The minimum dimensions for the bedroom "emergency escape and rescue openings" or EERO windows shall be 20 inches wide and 24 inches tall but still meet the 5.7 sq. ft. of actual opening area. The bottom sill for these windows shall not be located higher than 44 inches above the finished floor. All other existing basement windows are required to maintain their exact size and function.
- The permit packet submitted should include all above items for review and any other permit relevant information.
- **Delivery Options** – Mail or drop-off, M-F, 8a-4p. Online acceptance is not available at this time.
- Village of Buffalo Grove - Attn: Building Dept - 50 Raupp Blvd, Buffalo Grove, IL 60089
All other permits are submitted after the tenant buildout/remodel permit - www.vbg.org/permits



Step 2: Processing and Plan Review

- VBG strives for an average review turnaround time of 5 business days once all required information is provided. However, during high permit season times, April – October, reviews can take up to 10 business days. Permits are reviewed in sequential order. We do not have expedited reviews.
- If any portion of the application is not approved, the applicant will be sent a review letter to the email and/or address provided on the application. This letter will list all of the items that need to be addressed before permit issuance. Applicant must respond directly to plan reviewer in writing, providing corrected revisions as directed.
- Once approved, the applicant will be contacted with permit issuance information, fees and payment options.

Step 3: Permit Issuance and Construction Period

• PERMIT FEES:

Residential Basement Remodel – Minor:	\$300
Residential Basement Remodel – Intermediate:	\$750
Residential Basement Remodel – Major:	\$1,000
Permit Amendments	\$50



NOTE:

*Classification is based on complexity of project, as determined by Plans Examiner during review.
The fees do not include anything that would require a separate permit, such as windows, furnace, panel, etc.*

(Cash, check, and credit card with 3% processing fee – Not Accepted: AMEX)

- **Approved plans** are given to the applicant at permit issuance and must be on-site and accessible at all times. Permit card must remain posted until final inspections are approved.
- **Construction is permitted** on weekdays, 7am-7pm, and on weekends, 8am-7pm. (Village Municipal Code, Section 9.38.037) No materials or dumpsters are to be stored on the street or in the parkway.
- **Any changes to approved plans**, including a change in contractor, require an amendment to the existing permit. An [Amendment Form](#) must be submitted with supporting documentation showing the proposed changes and the \$50 amendment fee. No further inspections will be scheduled until the amendment is approved, paid and picked up.
- **Permit is invalid** if work does not commence within 6 months or is suspended or abandoned for a period of 6 months after commencement of work.

Step 4: Inspections

Review permit issuance page for inspection(s).

Email Directives: www.vbg.org/inspections **Email inspections:** inspections@vbg.org

Typical inspections are:

- **Roughs**
Electrical smoke detectors, fire stopping, underground plumbing, mechanical, structural, insulation, ceiling close up
- **Final inspections**
Electric, underground plumbing, mechanical, structural, insulation



Step 5: Completion

Upon completion and approval of final inspections, the permit will be closed out.

Additional Information and Contacts

VBG building permit documents and most permit inquiries can be found at www.vbg.org/permits.

Specific permit questions that are not under the VBG permit webpage, can be emailed to permits@vbg.org.

VBG Code of Ordinances can be found at https://library.municode.com/IL/Bufalo_Grove.



VILLAGE OF BUFFALO GROVE

COMBUSTION AIR CALCULATION WORKSHEET



Fifty Raupp Blvd | Buffalo Grove, IL 60089-2139 | Phone 847-459-2530 | www.vbg.org/permits

WHAT IS COMBUSTION AIR AND WHY IS IT REQUIRED FOR BASEMENT REMODELS?

Combustion air is the air needed to provide a continuous air supply for proper combustion (burning). It is air that a gas furnace, water heater, boiler and any other applicable appliances need in order to burn safely. Houses need combustion air ducts to give combustion appliances enough air to work correctly. Without a combustion air duct, uncontrolled air leakage will occur, and combustion appliances have the potential to burn inadequately or backdraft, causing safety issues. Most of these appliances are typically located in the basement of the house.

COMBUSTION AIR CALCULATIONS

Include this worksheet with your basement permit and requirements.

<p>Step 1</p> <p>Calculate the Room Volume</p>	<p>Room Volume:</p> <p style="margin-left: 100px;">Room length: _____</p> <p style="margin-left: 100px;">Room width: _____</p> <p style="margin-left: 100px;">Room height: _____</p> <p>Room Volume: <i>Length X Width X Height</i> = _____</p>																
<p>Step 2</p> <p>Calculate the total input of all appliances in the room.</p>	<p>Table 1 – Appliance Table <i>Add BTU/HR of each fuel burning appliances in the basement space.</i></p> <p>To find rating or BTU/HR: (Multiply) Total watts x 3.412 <i>For example: 1000-Watt Heater x 3.412 = 3,412 BTUs per hour</i></p> <table border="1" style="width: 100%; border-collapse: collapse; margin-top: 10px;"> <thead> <tr> <th style="text-align: left;">APPLIANCE</th> <th style="text-align: left;">INPUT RATING (BTU/HR)</th> </tr> </thead> <tbody> <tr> <td>Gas furnace(s)</td> <td></td> </tr> <tr> <td>Gas water heater(s)</td> <td></td> </tr> <tr> <td>Gas dryer</td> <td></td> </tr> <tr> <td>Other gas appliances</td> <td></td> </tr> <tr> <td>Other gas appliances</td> <td></td> </tr> <tr> <td style="text-align: center;">TOTAL BTU/HR</td> <td></td> </tr> <tr> <td style="text-align: center;">TOTAL ÷ 1000 = <i>This is the required volume →</i></td> <td></td> </tr> </tbody> </table>	APPLIANCE	INPUT RATING (BTU/HR)	Gas furnace(s)		Gas water heater(s)		Gas dryer		Other gas appliances		Other gas appliances		TOTAL BTU/HR		TOTAL ÷ 1000 = <i>This is the required volume →</i>	
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<p>Step 3</p> <p>Is additional air needed?</p>	<p>REQUIRED VOLUME: _____</p> <p><input type="checkbox"/> (YES) - Less than 50: Additional air is needed.</p> <p><input type="checkbox"/> (NO) - Greater than or equal to 50: <u>No</u> additional air is needed.</p>																



HOMEOWNER NOTIFICATION FORM BUILDING CODE SMOKE & CO2 DETECTOR UPGRADE

THIS FORM MUST BE SUBMITTED WITH THE PERMIT APPLICATION

Property Address: _____

This form serves as a notification to all homeowners and contractors of the building code requirement for the upgrade of existing residential smoke detectors and carbon monoxide detectors to current building code standards. The Village of Buffalo Grove has adopted the 2018 International Residential Code. Section R314 and R315 reads as follows:

Alterations, repairs and additions is stated in Section R314.2.2

- ❖ "Where alterations, repairs, or additions requiring a permit occur, the individual dwelling unit shall be equipped with smoke alarms located as required for new dwellings."
"Exceptions: Installation, alteration or repairs of plumbing and mechanical systems."

The location of smoke detectors is specified in Section R314.3 and R314.3.1

- ❖ "Smoke detectors shall be installed in the following locations: In each sleeping room. Outside each separate sleeping area in the immediate vicinity of the bedrooms. On each additional story of the dwelling, including basements and habitable attics but not including crawl spaces and uninhabitable attics."
"Smoke alarms shall be installed not less than 3 feet horizontally from the door or opening of a bathroom that contains a bathtub or shower unless this would prevent placement of a smoke alarm required by this section."
- ❖ Ionization smoke alarms shall not be installed less than 20 feet horizontally from a cooking appliance unless it has an alarm silencing switch. If it has the alarm silencing switch, it would not be allowed to be installed less than 10 feet horizontally from a cooking appliance. Photoelectric smoke alarms shall not be installed less than 6 feet from a cooking appliance.

The interconnection of smoke alarms is specified in Section R314.4

- ❖ "Where more than one smoke alarm is required to be installed within an individual dwelling unit in accordance with section R314.1, the alarm devices shall be interconnected in such a manner that the actuation of one alarm will activate all of the alarms in the individual dwelling unit. Physical interconnection of

smoke alarms shall not be required where listed wireless alarms are installed and all alarms sound upon activation of one alarm.

The required power source is stated in Sections R314.6

- ❖ "Smoke alarms shall receive their primary power from the building wiring where such wiring is served from a commercial source and, where primary power is interrupted, (the smoke alarm) shall receive power from a battery. Wiring shall be permanent and without a disconnecting switch other than those required for overcurrent protection."

(NO "BATTERY POWERED ONLY" UNITS ALLOWED)

Exceptions: Smoke alarms shall be permitted to "battery powered only" in areas where there is no attic access, opened ceiling to expose structural floor or ceiling joists or an unfinished basement.

Carbon Monoxide alarms are specified in Section R315

- ❖ The location of carbon monoxide alarms shall be installed outside of each separate sleeping area in the immediate vicinity of bedrooms. Where a fuel-burning appliance is located within a bedroom or its attached bathroom, a carbon monoxide alarm shall be installed within the bedroom. When more than one carbon monoxide alarm is installed, they shall be interconnected so that when one alarm sounds all alarms sound upon activation. The power source for carbon monoxide alarms is the same as for smoke alarms in Section R314.6

Combination units for smoke alarms and carbon monoxide alarms are specified in Sections R314.5 and R315.7.4

- ❖ Combination smoke alarms and carbon monoxide alarms shall be permitted in locations where both types are required.

I have read the above building code requirements and fully understand that all smoke detector requirements must be met in order to pass both the rough electric and final inspections on my room addition, remodel or alteration permit: I have also read all other plan review comments of building code requirements including the 2017 National Electrical Code NFPA 70 and fully understand these requirements shall be met in order to pass both the rough and final inspections on this addition, remodel or alteration permit.

Homeowner's:
Name: _____ Signature: _____ Date: _____

General Contractor's
Name: _____ Signature: _____ Date: _____

Electrical Contractor's
Name: _____ Signature: _____ Date: _____

**The electrical contractor shall discuss these requirements with the homeowner prior to issuance of the permit.*

***Electrical rough inspection for smoke & CO2 alarms shall be at the same time as all other electrical rough inspections.*