



TOWN OF RIB MOUNTAIN

Where Nature, Family & Sport Come Together

www.townofribmountain.org

3700 North Mountain Road
Wausau, Wisconsin 54401

(715) 842-0983

Fax(715) 848-0186

BUILDING PERMIT APPLICATION PROCEDURE

Building permit applications may be picked up at the Town Hall. Only complete applications will be reviewed for new home construction. Partially submitted applications, plans, or other data will be returned for completion. **Submission of the permit data is NOT an approval to start.** Anyone starting before actual permit issuance will be charged double fees, and possibly issued a citation.

Complete or provide the following data / procedures:

1. The local **“PERMIT APPLICATION for the Town of Rib Mountain”**. Submit this with a scaled plot plan showing the proposed location of the dwelling, and any other buildings, wells, disposal systems, and driveways on the property with respect to property lines.
2. Zoning occupancy bond per RMMC Sec. 17.229 (1% of the project cost / \$1,000 min).
3. A copy of your Marathon County Sanitary Permit or Rib Mountain Sanitary Permit.
4. A copy of any required County Land Use, shoreland, wetland, or floodplain permits (any site within 300 feet of a river or 1,000 feet of a lake or pond).
5. Driveway permit application.
6. State of Wisconsin standard “Building Permit Application”.
7. State UDC Approved Energy Worksheets and inspection sheets (REScheck)
8. UDC Makeup and Combustion Air worksheet
9. Soil & Erosion Control Worksheets / Plan.
10. Water System Calculations and plan for all projects above elevation 1,250’.
11. An electrical plan, circuit listing, and load calculations.
12. Two (2) complete sets of plans, specifications, and other details, including:
 - a. Floor plans which include: Room sizes; door sizes; window glass sizes. Structural features – size, species and grade of lumber or other structural descriptions of joists, beams, rafters, headers, studs, and columns. Strength, thickness, and reinforcement of concrete for footings, foundations, and any other concrete / masonry work. Stairs and hallways, including riser and tread dimensions, headroom, guardrails, and handrails. Plumbing fixtures. Heating, ventilating, and air conditioning equipment. Smoke & Carbon Monoxide detectors, attic accesses, and fire separations.
 - b. Elevations which show exterior materials, doors, windows, chimneys, grade, etc.
 - c. Cross-sectional drawing and details.
 - d. Wall Bracing Plans per Comm. 321.25(8)



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INSPECTION REQUIREMENTS FOR 1 & 2 FAMILY DWELLINGS

NOTICE is hereby given to the applicant for a one or two family dwelling building permit, that said applicant is required under Section 320.10 of the Wisconsin Uniform Dwelling Code to have inspections by the building inspector or deputy at certain times during the progressive construction. The building inspector shall perform the inspection. Construction shall not proceed beyond the point of inspection until the inspection has been completed or the 48 hours have lapsed. The following sequence of inspections shall be performed for the purpose of determining if the work complies with the requirements of the State Code.

SANITARY: Call Marathon Country for well and septic inspections (715-261-6020).
Call the Rib Mountain Sanitary District (715-359-6177) for sewer and water lateral inspections.

FOOTINGS: Confirmation of soil types, footing size, and drain tile. Erosion control inspections shall be performed concurrently. If rebar is used, provisions must be made to attach the electrical service ground.

FOUNDATION / ELECTRICAL SERVICE: The excavation shall be inspected after the placement of forms, shoring, and reinforcement, and prior to the placement of concrete. Below grade drain tiles, waterproofing, exterior insulation, foundation lintels, as well as any underground plumbing, shall be inspected prior to backfilling. Indoor electrical service equipment shall be covered and kept dry.

ROUGH INSPECTION: A rough inspection shall be performed for each inspection category listed below, after the work is completed, but before it is concealed. The applicant may request one rough inspection or individual rough inspections. A separate fee may be charged for each individual re-inspection.

- a. general construction;
- b. rough electrical;
- c. rough plumbing;
- d. rough heating, ventilating, and A. C.;
- e. insulation.

FINAL INSPECTION: The dwelling may not be occupied until a final inspection has been made which finds that no violations of the code exist that could be reasonably be expected to affect the health and safety of the occupants.

OCCUPANCY PERMITS: Failure to procure a Zoning Occupancy Permit prior to occupancy of the dwelling may cause forfeiture of penalties or the occupancy bond.

CALL THE TOWN HALL (715-842-0983) FOR INSPECTIONS 48 HOURS BEFORE PROCEEDING WITH CONSTRUCTION. HAVE YOUR PERMIT NUMBER AND PROPERTY ADDRESS READY FOR THE RECEPTIONIST.



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Permit #: _____ Exp. Date: _____

Parcel #: _____

For Inspections Call: 715-842-0983

RESIDENTIAL BUILDING PERMIT APPLICATION

Project Description: _____

Building Address: _____

Project Contact Person (email / phone): _____

Owner's Name	Address		Telephone
			Email
Construction Contractor	Cert #	Address	Telephone
			Email
Dwelling Contractor Qualifier	Cert #	The Dwelling Contr. Qual. Shall be an owner, CEO, COB or employee of the Construction Contractor	Telephone
			Email
HVAC	Cert #	Address	Telephone
			Email
Electrical	Cert #	Address	Telephone
			Email
Plumbing	Cert #	Address	Telephone
			Email

Construction Type

<input type="checkbox"/> New Single Family Residence	<input type="checkbox"/> Remodel	<input type="checkbox"/> Electrical Service Upgrade	<input type="checkbox"/> Deck
<input type="checkbox"/> Addition	<input type="checkbox"/> Accessory Building	<input type="checkbox"/> Swimming Pool	<input type="checkbox"/> Wrecking

Permits Needed

<input type="checkbox"/> Construction	<input type="checkbox"/> Electrical	<input type="checkbox"/> Plumbing	<input type="checkbox"/> HVAC	<input type="checkbox"/> Erosion Control
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Project Sq.Ft. _____ **Est. Project Cost (\$)** _____ **Building Height (ft)** _____

Zoning District _____ **NRP Overlay Districts**

<input type="checkbox"/> Flood Plain	<input type="checkbox"/> Shoreland*	<input type="checkbox"/> Steep Slope	<input type="checkbox"/> Woodland
<input type="checkbox"/> Wetland	<input type="checkbox"/> Lakeshore	<input type="checkbox"/> Recharge	<input type="checkbox"/> Drainageway

Setbacks: Front/Street Yard _____ Left Side _____ Right Side _____ Rear Yard _____

* THE PROPERTY OWNER OR APPLICANT IS HEREBY ADVISED THAT PROPERTIES WITH PRIVATE ONSITE WATER/WASTEWATER TREATMENT SYSTEMS SHOULD CONTACT MARATHON COUNTY CONSERVATION, PLANNING, AND ZONING AT 715-261-6021 FOR THE SETBACK INFORMATION.

* THE PROPERTY OWNER OR APPLICANT IS HEREBY ADVISED THAT PROPERTIES WITHIN 300 FEET OF THE RIB RIVER AND WISCONSIN RIVER OR WITHIN 1000 FEET OF LAKE WAUSAU, BUT NOT ON THE WATER, ARE REQUIRED TO PROCURE A MARATHON COUNTY SHORELAND PERMIT.

** The applicant hereby agrees to comply with all Federal, State, County and Municipal regulations; with the conditions of this permit; and understands that the issuance of this permit creates no legal liability, expressed or implied on the Town of Rib Mountain. The applicant certifies that all of the information contained herein is true and correct. The applicant is hereby advised that the findings of inspection are intended to report conditions of apparent non-compliance with code standards that are readily apparent at the time of inspection. The inspection of property does not involve a detailed examination of the mechanical systems or the closed structural and non-structural elements of the building and/or premises. No guarantee or warranty of the premises, operation, use of the durability of equipment or materials not specifically cited herein is expressed or implied.

*** Note that it is ultimately the owners/applicants responsibility to secure the required inspections and to have said inspections recorded. Failure to do so may result in forfeiture of the occupancy bond and denial of an occupancy permit. Occupancy prior to final inspection and approval is automatic cause for forfeiture of the occupancy bond. Bond shall also be forfeited for incompletion of project in a timely manner.

APPLICANT SIGNATURE _____ **DATE SIGNED** _____

Fees	Permits Issued	Permit Status
Base Fee \$ _____	<input type="checkbox"/> Construction	<input type="checkbox"/> Issued <input type="checkbox"/> Issued w/ Conditions <input type="checkbox"/> Denied
Plan Review \$ _____	<input type="checkbox"/> Electrical	Name _____
Inspections \$ _____	<input type="checkbox"/> Plumbing	Date _____ Phone _____
Bonds \$ _____	<input type="checkbox"/> HVAC	Certification No. _____
Park \$ _____	<input type="checkbox"/> Erosion Control	
Other \$ _____	<input type="checkbox"/> Other _____	
Total \$ _____		

See Reverse Side for Conditions of Approval and Cautionary Statement to Owners Obtaining Building Permits

Conditions of Approval or Reasons for Denial

Cautionary Statement to Owners Obtaining Building Permits

101.65(lr) of the Wisconsin Statutes requires municipalities that enforce the Uniform Dwelling Code to provide an owner who applies for a building permit with a statement advising the owner that: If the owner hires a contractor to perform work under the building permit and the contractor is not bonded or insured as required under s. 101.654 (2) (a), the following consequences might occur:

(a) The owner may be held liable for any bodily injury to or death of others or for any damage to the property of others that arises out of the work performed under the building permit or that is caused by any negligence by the contractor that occurs in connection with the work performed under the building permit.

(b) The owner may not be able to collect from the contractor damages for any loss sustained by the owner because of a violation by the contractor of the one- and two- family dwelling code or an ordinance enacted under sub. (1) (a), because of any bodily injury to or death of others or damage to the property of others that arises out of the work performed under the building permit or because of any bodily injury to or death of others or damage to the property of others that is caused by any negligence by the contractor that occurs in connection with the work performed under the building permit.

Cautionary Statement to Contractors for Projects Involving Building Built Before 1978

If this project is in a dwelling or child-occupied facility, built before 1978, and disturbs 6 sq. ft. or more of paint per room, 20 sq. ft. or more of exterior paint, or involves windows, then the requirements of ch. DHS 163 requiring Lead-Safe Renovation Training and Certification apply. For details of how to be in compliance, call (608)261-6876 or go to: <http://dhs.wisconsin.gov/lead/WisconsinRRPRule.htm>

Wetlands Notice to Permit Applicants

You are responsible for complying with state and federal laws concerning the construction near or on wetlands, lakes, and streams. Wetlands that are not associated with open water can be difficult to identify. Failure to comply may result in removal or modification of construction that violates the law or other penalties or costs. For more information, visit the Department of Natural Resources wetlands identification web page or contact a Department of Natural Resources service center.

Additional Responsibilities for Owners of Projects Disturbing One or More Acre of Soil

I understand that this project is subject to ch. NR 151 regarding additional erosion control and stormwater management and will comply with those standards.

Information Required for Permit Type

<i>New Single Family</i>		Accessory Building	Deck
<input type="checkbox"/> Scaled Site Plan w/ Proposed Building Location <input type="checkbox"/> Sanitary Permit <input type="checkbox"/> Other Zoning Permits if Applicable <input type="checkbox"/> Driveway Permit Application <input type="checkbox"/> UDC Approved Energy Worksheet <input type="checkbox"/> UDC Makeup and Combustion Air Worksheet <input type="checkbox"/> Soil & Erosion Control Worksheet <input type="checkbox"/> Water System Calcs for Projects over 1250' elevation	<input type="checkbox"/> Two (2) Complete Sets of Plans - Floor Plans, Elevations, Cross-Sections, Details, Wall Bracing Addition <input type="checkbox"/> Scaled Site Plan w/ Proposed Addition Location <input type="checkbox"/> Other Zoning Permits if Applicable <input type="checkbox"/> Complete Sets of Plans - Floor Plans, Elevations, Cross-Sections, Details <input type="checkbox"/> Any UDC Energy, Makeup or Combustion Air Worksheets if Applicable	<input type="checkbox"/> Scaled Site Plan w/ Proposed Addition Location <input type="checkbox"/> Other Zoning Permits if Applicable <input type="checkbox"/> Complete Sets of Plans - Floor Plans, Elevations, Cross-Sections, Details Remodel <input type="checkbox"/> Sets of Plans indicating extent of the remodel	<input type="checkbox"/> Scaled Site Plan w/ Proposed Deck Location <input type="checkbox"/> Other Zoning Permits if Applicable Swimming Pool



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Permit #:	Exp. Date:
Parcel #:	
3700 N. Mountain Road Wausau, WI 54401	Phone: 715-842-0983 Fax: 715-848-0186

Driveway Installation Permit Application

Applicant:		Telephone #	
Mailing Address	City	State	Zip

The Property Owner may only install a concrete driveway to the property line. Any concrete installed beyond the property line shall be removed at the owner's expense. The contractor/property owner shall call when ready for culvert installation. The property owner is responsible for any damages resulting to culverts from excessive truck traffic over culvert.

Installation Address	City	State	Zip
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****WAIVER OF SPECIAL ASSESSMENT NOTICES AND HEARINGS** Under Sec.66.60(18), Wisconsin Statutes**
In consideration of the construction by the Town of Rib Mountain, Wisconsin, of the following proposed public improvement, described at the above mentioned property. We, the undersigned, hereby admit this improvement will benefit our below described properties in the Town of Rib Mountain and consent to the levying of special assessments against our premises under Sec. 66.60(18) Wis. Stats., we hereby waive all special assessment notices and hearings as required by Sec. 66.60 Wis. Stats.

APPLICANT SIGNATURE _____ **DATE SIGNED** _____

Draw a Sketch of the Driveway Installation Location



IS A CULVERT REQUIRED?	YES / NO	Diameter: _____ (in)	Length: _____ (ft)
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SUPERINTENDENT'S SIGNATURE _____	DATE SIGNED _____
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Notes:

8.01 - DRIVEWAYS. (Rep. & recr. #97-02) Modified

- (1) PERMIT. No person shall alter or construct any driveway over or across any Town right-of-way or any sidewalk or curbing in the Town without first securing approval from the Chairperson of the Town of Rib Mountain Public Works Committee.
- (2) WIDTH AND DISTANCE. Driveways shall be no wider than 25 feet at property lines, except a duplex may have a driveway up to 40 feet wide serving multiple attached and adjoining garages, and the nearest boundary of any driveway shall be at least 30 feet from a corner crosswalk. Any person desiring 2 driveways into the same property shall have at least 15 feet between driveways. If driveways in excess of 2 into any one property are desired, permission from the Town Board is required. Property located on a corner may have driveways entering the property from each street. However, if 2 driveways are provided on one street, only one driveway will be allowed on the other street without special permission from the Town Board. Any driveway which presents a concern or threat to traffic flow or public safety shall be referred to the Town Board for further action.
- (3) MATERIALS. (Am. #2014-03) Driveways on the property may be of any hard surface material but may only extend beyond the property line into the public right-of-way when constructed of asphalt. Concrete may only be used in the public right-of-way if the street is concrete with permanent curb and gutter installed. The Town will only replace driveway approaches in asphalt. Driveways on the property of all new commercial or residential construction shall be concrete or asphalt. Exceptions may be given to driveways located in recreational, agricultural, or rural residential zones, with the approval of the Superintendent of Streets and Zoning Administrator. Such exceptions shall be a well compacted granular material not subject to erosion, and so noted on the driveway permit approval.
- (4) CULVERTS AND ENDWALLS. Culverts and endwalls are required where deemed necessary by the Town.
- (5) VARIANCES. The Town Board may authorize construction or alteration of driveways not conforming to this chapter.
- (6) NONCONFORMING DRIVEWAYS. Private driveways existing on Town streets may be continued in their present use but shall not be expanded in width nor use, and if their present use is discontinued for a period of 90 days or repairs or alterations exceed 50 percent of the original driveway area, such driveways shall conform to this section.

Dept of Safety & Professional Services Industry Services Division Wisconsin Stats. 101.63, 101.73	<h2 style="margin:0;">Wisconsin Uniform Building Permit Application</h2> <p style="margin:0;">Instructions on back of second ply. The information you provide may be used by other government agency programs [(Privacy Law, s. 15.04 (1)(m))]</p>	Application No. Parcel No.																									
PERMIT REQUESTED <input type="checkbox"/> Constr. <input type="checkbox"/> HVAC <input type="checkbox"/> Electric <input type="checkbox"/> Plumbing <input type="checkbox"/> Erosion Control <input type="checkbox"/> Other:																											
Owner's Name		Mailing Address	Tel.																								
Contractor Name & Type		Lic/Cert#	Mailing Address																								
Dwelling Contractor (Constr.)			Tel. & Fax																								
Dwelling Contr. Qualifier		The Dwelling Contr. Qualifier shall be an owner, CEO, COB or employee of the Dwelling Contr.																									
HVAC																											
Electrical																											
Plumbing																											
PROJECT LOCATION	Lot area Sq.ft.	<input type="checkbox"/> One acre or more of soil will be disturbed	<input type="checkbox"/> Town <input type="checkbox"/> Village <input type="checkbox"/> City of _____ 1/4, _____ 1/4, of Section _____, T _____ N, R _____ E/W																								
Building Address		County	Subdivision Name																								
		Lot No.	Block No.																								
Zoning District(s)	Zoning Permit No.	Setbacks:	Front ft. Rear ft. Left ft. Right ft.																								
1. PROJECT	3. OCCUPANCY	6. ELECTRIC	9. HVAC EQUIP.																								
<input type="checkbox"/> New <input type="checkbox"/> Repair <input type="checkbox"/> Alteration <input type="checkbox"/> Raze <input type="checkbox"/> Addition <input type="checkbox"/> Move <input type="checkbox"/> Other:	<input type="checkbox"/> Single Family <input type="checkbox"/> Two Family <input type="checkbox"/> Garage <input type="checkbox"/> Other:	Entrance Panel Amps: _____ <input type="checkbox"/> Underground <input type="checkbox"/> Overhead	<input type="checkbox"/> Furnace <input type="checkbox"/> Radiant Basebd <input type="checkbox"/> Heat Pump <input type="checkbox"/> Boiler <input type="checkbox"/> Central AC <input type="checkbox"/> Fireplace <input type="checkbox"/> Other:																								
2. AREA INVOLVED (sq ft)	4. CONST. TYPE	7. WALLS	12. ENERGY SOURCE																								
	<input type="checkbox"/> Site-Built <input type="checkbox"/> Mfd. per WI UDC <input type="checkbox"/> Mfd. per US HUD	<input type="checkbox"/> Wood Frame <input type="checkbox"/> Steel <input type="checkbox"/> ICF <input type="checkbox"/> Timber/Pole <input type="checkbox"/> Other:	<table border="1" style="width:100%; border-collapse: collapse;"> <tr> <td>Fuel</td> <td>Nat Gas</td> <td>LP</td> <td>Oil</td> <td>Elec</td> <td>Solid</td> <td>Solar Geo</td> </tr> <tr> <td>Space Htg</td> <td><input type="checkbox"/></td> <td><input type="checkbox"/></td> <td><input type="checkbox"/></td> <td><input type="checkbox"/></td> <td><input type="checkbox"/></td> <td><input type="checkbox"/></td> </tr> <tr> <td>Water Htg</td> <td><input type="checkbox"/></td> <td><input type="checkbox"/></td> <td><input type="checkbox"/></td> <td><input type="checkbox"/></td> <td><input type="checkbox"/></td> <td><input type="checkbox"/></td> </tr> </table>	Fuel	Nat Gas	LP	Oil	Elec	Solid	Solar Geo	Space Htg	<input type="checkbox"/>	Water Htg	<input type="checkbox"/>													
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<table border="1" style="width:100%; border-collapse: collapse;"> <thead> <tr> <th></th> <th>Unit 1</th> <th>Unit 2</th> <th>Total</th> </tr> </thead> <tbody> <tr> <td>Unfin. Bsmt</td> <td></td> <td></td> <td></td> </tr> <tr> <td>Living Area</td> <td></td> <td></td> <td></td> </tr> <tr> <td>Garage</td> <td></td> <td></td> <td></td> </tr> <tr> <td>Deck/Porch</td> <td></td> <td></td> <td></td> </tr> <tr> <td>Totals</td> <td></td> <td></td> <td></td> </tr> </tbody> </table>		Unit 1	Unit 2	Total	Unfin. Bsmt				Living Area				Garage				Deck/Porch				Totals				5. STORIES	8. USE	10. SEWER
	Unit 1	Unit 2	Total																								
Unfin. Bsmt																											
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Garage																											
Deck/Porch																											
Totals																											
	<input type="checkbox"/> 1-Story <input type="checkbox"/> 2-Story <input type="checkbox"/> Other: <input type="checkbox"/> Plus Basement	<input type="checkbox"/> Seasonal <input type="checkbox"/> Permanent <input type="checkbox"/> Other:	<input type="checkbox"/> Municipal <input type="checkbox"/> Sanitary Permit# _____																								
			11. WATER																								
			<input type="checkbox"/> Municipal <input type="checkbox"/> On-Site Well																								
			13. HEAT LOSS																								
			_____ BTU/HR Total Calculated Envelope and Infiltration Losses (available from "Total Building Heating Load" on Rescheck report)																								
			14. EST. BUILDING COST w/o LAND																								
			\$ _____																								
<p>I understand that I: am subject to all applicable codes, laws, statutes and ordinances, including those described on the reverse side of the last ply of this form; am subject to any conditions of this permit; understand that the issuance of this permit creates no legal liability, express or implied, on the state or municipality; and certify that all the above information is accurate. If one acre or more of soil will be disturbed, I understand that this project is subject to ch. NR 151 regarding additional erosion control and stormwater management and the owner shall sign the statement on the back of the permit if not signing below. I expressly grant the building inspector, or the inspector's authorized agent, permission to enter the premises for which this permit is sought at all reasonable hours and for any proper purpose to inspect the work which is being done.</p> <p><input type="checkbox"/> I vouch that I am or will be an owner-occupant of this dwelling for which I am applying for an erosion control or construction permit without a Dwelling Contractor Certification and have read the cautionary statement regarding contractor responsibility on the reverse side of the last ply of this form.</p>																											
APPLICANT (Print:) _____		Sign: _____	DATE _____																								
APPROVAL CONDITIONS This permit is issued pursuant to the following conditions. Failure to comply may result in suspension or revocation of this permit or other penalty. <input type="checkbox"/> See attached for conditions of approval.																											
ISSUING JURISDICTION		<input type="checkbox"/> Town of <input type="checkbox"/> Village of <input type="checkbox"/> City of <input type="checkbox"/> County of <input type="checkbox"/> State→	State-Contracted Inspection Agency#:																								
			Municipality Number of Dwelling Location _____ - _____ - _____																								
FEES:		PERMIT(S) ISSUED	WIS PERMIT SEAL #																								
Plan Review	\$ _____	<input type="checkbox"/> Construction																									
Inspection	\$ _____	<input type="checkbox"/> HVAC																									
Wis. Permit Seal	\$ _____	<input type="checkbox"/> Electrical																									
Other	\$ _____	<input type="checkbox"/> Plumbing																									
Total	\$ _____	<input type="checkbox"/> Erosion Control																									
			PERMIT ISSUED BY:																								
			Name _____																								
			Date _____ Tel. _____																								
			Cert No. _____																								

INSTRUCTIONS

The owner, builder or agents shall complete the application form down through the Signature of Applicant block and submit it and building plans and specifications to the enforcing jurisdiction, which is usually your municipality or county. Permit application data is used for statewide statistical gathering on new one- and two-family dwellings, as well as for local code administration.

Please type or use ink and press firmly with multi-ply form.

PERMIT REQUESTED

- Check off type of Permit Requested, such as structural, HVAC, Electrical or Plumbing.
- Fill in owner's current Mailing Address and Telephone Number.
- If the project will disturb one acre or more of soil, the project is subject to the additional erosion control and stormwater provisions of ch. NR 151 of the WI Administrative Code. Checking this box will satisfy the related notification requirements of ch. NR 216.
- Fill in Contractor and Contractor Qualifier Information. Per s. 101.654 (1) WI Stats., an individual taking out an erosion control or construction permit shall enter his or her dwelling contractor certificate number, and name and certificate number of the dwelling contractor qualifier employed by the contractor, unless they reside or will reside in the dwelling. Per s. 101.63 (7) Wis. Stats., the master plumber name and license number must be entered before issuing a plumbing permit.

PROJECT LOCATION

- Fill in Building Address (number and street or sufficient information so that the building inspector can locate the site.
- Local zoning, land use and flood plain requirements must be satisfied before a building permit can be issued. County approval may be necessary.
- Fill in Zoning District, lot area and required building setbacks.

PROJECT DATA - Fill in all numbered project data blocks (1-14) with the required information. All data blocks must be filled in, including the following:

2. Area (involved in project):
 - Basements - include unfinished area only
 - Living area - include any finished area including finished areas in basements
 - Two-family dwellings - include separate and total combined areas
3. Occupancy - Check only "Single-Family" or "Two-Family" if that is what is being worked on. In other words, do not check either of these two blocks if only a new detached garage is being built, even if it serves a one or two family dwelling. Instead, check "Garage" and number of stalls. If the project is a community based residential facility serving 3 to 8 residents, it is considered a single-family dwelling.
9. HVAC Equipment - Check only the major source of heat, plus central air conditioning if present. Only check "Radiant Baseboard" if there is no central source of heat.
10. Plumbing - A building permit cannot be issued until a sanitary permit has been issued for any new or affected existing private onsite wastewater treatment system.
14. Estimated Cost - Include the total cost of construction, including materials and market rate labor, but not the cost of land or landscaping.

SIGNATURE – The owner or the contractor's authorized agent shall sign and date this application form. If you do not possess the Dwelling Contractor certification, then you will need to check the owner-occupancy statement for any erosion control or construction permits.

CONDITIONS OF APPROVAL - The authority having jurisdiction uses this section to state any conditions that must be complied with pursuant to issuing the building permit.

ISSUING JURISDICTION: This must be completed by the authority having jurisdiction.

- Check off Jurisdiction Status, such as town, village, city, county or state and fill in Municipality Name
- Fill in State Inspection Agency number only if working under state inspection jurisdiction.
- Fill in Municipality Number of Dwelling Location
- Check off type of Permit Issued, such as construction, HVAC, electrical or plumbing.
- Fill in Wisconsin Uniform Permit Seal Number, if project is a new one- or two-family dwelling.
- Fill in Name and Inspector Certification Number of person reviewing building plans and date building permit issued.

INSPECTORS: PLEASE RETURN SECOND PLY WITHIN 30 DAYS AFTER ISSUANCE TO (You may fold along the dashed lines and insert this form into a window envelope.):

Industry Services Division
PO Box 7302
Madison WI 53707-7302

(Part of Ply 4 for Applicants)

Cautionary Statement to Owners Obtaining Building Permits

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Additional Responsibilities for Owners of Projects Disturbing One or More Acre of Soil

I understand that this project is subject to ch. NR 151 regarding additional erosion control and stormwater management and will comply with those standards.

Owner's Signature: _____ Date: _____

Contractor Credential Requirements

All contractors shall possess an appropriate contractor credential issued by the Wisconsin Division of Industry Services. Contractors are also required to only subcontract with contractors that hold the appropriate contractor credentials.

Wisconsin Uniform Dwelling Code Energy Worksheet

Instructions: This worksheet is a Safety & Buildings Division (S&BD)-approved method of manually showing compliance with the energy conservation and heating equipment sizing requirements of the Uniform Dwelling Code (UDC), for new dwelling permits **submitted on or after May 1, 1999**. It may be necessary for the user to purchase a copy of the UDC from State Document Sales, (608)266-3358. Additional information is printed in the UDC Commentary, which is available for a fee, as are blank copies of this form, from S&BD at POB 2509, Madison, WI 53701, Tel. 608-267-4405. **Earlier editions of this worksheet may NOT be used.** Numbers in brackets, [1], refer to the footnotes printed on page 2.

You may also submit completed worksheets from the computer program *MECcheck* (formerly *WIScheck*), which is available for free downloading from <http://www.energycodes.org/> on the Internet.

A **required U-value** is the **maximum** acceptable heat transmittance for an element. A **required insulation R-value** is the **minimum** acceptable level of resistance to heat transmittance. (U-values and R-values are reciprocals of each other.) If a component includes two or more areas of different insulation levels, either use the less insulating value for both areas, or use the Optional Weighted Average table in the **Prescriptive Package Method** section or enter separate areas and insulation values in the **System Design Method**. All "U" values must be carried to four places after the decimal point, rounded to three places. Other values may be rounded to the whole number.

Window and door U-values must be tested and documented by the manufacturer in accordance with the National Fenestration Rating Council (NFRC) test procedures or be taken from the glazing U-value table in s. Comm 22.05. Center-of-glass U-values cannot be used. If a door contains glass, and an aggregate U-value rating for that door is not available, then include the glass area of the door with your windows and use the opaque door U-value to determine compliance of the door.

A **slab-on-grade** is an earth-supported floor slab that is above, or less than 12" below, adjacent grade.

High-efficiency heating equipment is given a credit by the code. "High-Efficiency" means a furnace or boiler with an AFUE of 90% or more, or a heat pump with an HSPF of 7.8 or more without the use of electric resistance backup heat of greater than 3 kilowatts. If you plan to install more than one piece of heating equipment, the equipment with the lowest efficiency must meet or exceed the efficiency required by the selected package.

Choice of Method: You have the choice of using the Prescriptive Package Method or the System Design Method to show code compliance. For the simpler **Prescriptive Package Method**, which is recommended for standard designs, complete Sections **A., B., F., and G.** Instructions are on page 2. You will be first calculating component areas, then comparing your planned insulation levels to the required insulation levels of the Prescriptive Packages. You will then calculate infiltration and ventilation heat losses to size your heating equipment. If you cannot comply with one of the prescriptive packages, you may be able to show compliance by the System Design Method.

For the **System Design Method**, which is recommended for alternative designs in which more insulation is installed in one component to offset less in another, complete **Sections A., C., D., E., F. and G.** You will be first calculating component areas, then a code-allowed heat loss factor, then component U- and R-values and then your calculated heat loss factor which you will compare to the code-allowed heat loss factor. You will then calculate infiltration and ventilation heat losses to size your heating equipment.

The **County Zone Table** below is use for determining the temperature difference for sizing your heating plant in Section G. You may submit to your local code official more exact calculations to size your heating equipment.

Zone 1 - 95 degrees	Zone 2 - 90 degrees	Zone 3 - 85 degrees	Zone 4 - 80 degrees
Ashland, Barron, Bayfield, Burnett, Chippewa, Douglas, Dunn, Florence, Forest, Iron, Lincoln, Oneida, Pierce, Polk, Price, Rusk, Saint Croix, Sawyer, Taylor, Vilas, Washburn	Adams, Buffalo, Clark, Eau Claire, Jackson, Juneau, LaCrosse, Langlade, Marathon, Marinette, Menominee, Monroe, Portage, Shawano, Oconto, Pepin, Trempeleau, Vernon, Waupaca, Wood	Brown, Calumet, Columbia, Crawford, Dane, Dodge, Door, Fond du Lac, Grant, Green, Green Lake, Iowa, Kewaunee, LaFayette, Manitowoc, Marquette, Outagamie, Richland, Sauk, Sheboygan, Waushara, Winnebago	Jefferson, Kenosha, Milwaukee, Ozaukee, Racine, Rock, Walworth, Washington, Waukesha

Detailed Instructions for Section B. Prescriptive Package Method:

R-value requirements are for insulation only and do not include structural components.

For a component with two or more areas of different insulation levels, either use the least insulating value for both areas or use the Weighted Average tables on page 4.

Wall R-values represent the sum of the wall cavity insulation plus insulating sheathing, if used. Do not include exterior siding, structural sheathing or interior drywall. For example, an R-20 requirement could be met *EITHER* by R-15 cavity insulation plus R-5 sheathing *OR* R-13 cavity insulation plus R-7 sheathing. Note that there are separate tables for walls with structural sheathing only and for walls with insulating sheathing. To use a table for insulating sheathing, the sheathing used must be at least R-4, except that at least R-2 insulation may be provided over corner bracing. Table wall R-Values apply to wood-frame or mass (concrete, masonry, log) wall assemblies, but not to metal-frame construction. If metal frame is planned, use the adjusted R-Values from the Metal-Frame Wall Tables of the UDC Appendix. Table wall values apply to boxesills.

Ceiling R-values represent the sum of the cavity insulation plus insulating sheathing, if used. For ventilated ceilings, any insulating sheathing must be placed between the conditioned space and the ventilated portion of the roof. Ceiling R-values with “**RT**” indicates that a raised-heel truss or oversized truss construction must be used so that the insulation achieves the full insulation thickness over the exterior walls.

"Floor" requirements apply to floors over unconditioned spaces (such as un-insulated crawlspaces, basements and garages). Other floors that are over outside air shall have a $U_{\text{overall}} = 0.033$ or R-30 added insulation.

"Heated-Slab" requirements apply to slabs that contain heat ducts or pipes. All slab insulation must extend at least 48 inches either 1) down from the top of the slab, or 2) down from the top of the slab to the bottom of the slab and then horizontally underneath the slab, or 3) down from the top of the slab to the bottom of the slab and then horizontally away from the slab, with pavement or at least 10 inches of soil covering the horizontal insulation.

Walls of basements below un-insulated floors must be insulated from the top of the basement wall to the level of the basement floor. Conditioned basement windows and glass doors must be included with the other glazing. Exterior basement doors must meet the door U-value requirements. If more than 50% of the basement is exposed, then all of the basement walls must instead meet the above-foundation wall requirements.

Crawl space wall R-value requirements are for walls of unventilated crawlspaces. The crawlspace wall insulation must extend from the top of the wall (including the sill plate) to at least 12 inches below the outside finished grade. If the distance from the outside finished grade to the top of the footing is less than 12 inches, the insulation must extend vertically downward plus horizontally for a total distance of 24 inches from the outside finished grade.

Footnotes for worksheet:

- [1] Opaque wall area is wall area minus opening areas of doors and windows.
- [2] These below-grade U-values have the insulating value of the soil added to the code-required U-values which apply to the building materials only. See Sect. D.2. for typical insulated component U-values.
- [3] These slab-on-grade F-values are derived from the code-required U-values and include the heat loss through the edge and body of the slab. See Sect. D.2.
- [4] For building additions, show that the existing heating equipment, if used to heat the addition, is large enough. To do so, you must calculate the heat loss of the whole building.
- [5] If desired manufacturer does not have a furnace of this size, then a designer may select the manufacturer's next larger size.

Submit completed worksheet pages 3-6 with dwelling plans to local enforcing municipality.

Project Address: _____

Builder: _____ Owner: _____

Worksheet Completed By: _____ Date: _____

Does dwelling unit have three kilowatts or more input capacity of permanently installed electrical space heating equipment?

YES (see below) NO

You will need to apply the stricter standards shown for electrically-heated homes if you answered "YES" to the above question.

A. Area Calculations Enter appropriate dimensions to obtain area values. Some calculations will not be necessary depending on home design or calculation method. These calculated areas are referenced elsewhere on this worksheet, for example, "(A.1.)".

<p>1. Window, Skylight & Patio Door Area (overall unit area) a. In Above-Foundation Walls b. In Foundation Walls</p> <p>_____ sq. ft. _____ sq. ft.</p> <p>c. Total (a. + b.) = _____</p>	<p>2. Opaque Door Area a. In Above- Foundation Walls b. In Foundation Walls</p> <p>_____ sq. ft. _____ sq. ft.</p> <p>c. Total (a. + b.) = _____</p>
<p>3. Gross Exposed Basement Wall Area</p> <p>_____ sq. ft.</p>	<p>4. Basement Wall Area Below Grade</p> <p>_____ sq. ft.</p>
<p>5. Opaque [1] Basement Wall Area (A.3. + A.4. - A.1.b.- A.2.b.)</p> <p>_____ sq. ft.</p> <p>If the exposed area of A.3.is greater than the below grade area of A.4., add A.5. to A.7 and cross out the number in this cell.</p>	<p>6. Gross Heated Above-Foundation Wall Area, including boxsill</p> <p>_____ sq. ft.</p>
<p>7. Above Foundation Code Wall Area (A.6. + A1.b. + A.2.b.)</p> <p>_____ sq. ft.</p>	<p>8. Opaque [1] Above-Foundation Wall Area (A.6. - A1.a. - A.2.a.)</p> <p>_____ sq. ft.</p>
<p>9. Floor Area Over Interior Unconditioned Spaces Less Than 50°</p> <p>_____ sq. ft.</p>	<p>10. Insulated Roof Or Ceiling (less skylights)</p> <p>_____ sq. ft.</p>
<p>11. Floor Over Outside Air (Overhangs)</p> <p>_____ sq. ft.</p>	<p>12. Crawl Space Wall Area</p> <p>_____ sq. ft.</p>
<p>13. Slab On Grade (above or less than 12 inches below grade)</p> <p>_____ lineal feet of slab perimeter</p>	<p>14. Total Heated Envelope Area (A.5 + A.7 + A.9 + A.10 +A.11 + A.12 +(A.13. × 2'))</p> <p>_____ sq. ft.</p>
<p>15. Percent Glazing (for Prescriptive Package Method, Section B, only) (A.1.c. ÷ A.7. × 100%)</p> <p>_____ %</p>	<p>16. Windows Description - Above-Foundation Windows: Frame type: <input type="checkbox"/> Wood or Wood Clad <input type="checkbox"/> Vinyl <input type="checkbox"/> Metal Glazing type: <input type="checkbox"/> Dual <input type="checkbox"/> Triple <input type="checkbox"/> Dual w/storm panel Dual-Glazing Air Space: <input type="checkbox"/> 1/4" <input type="checkbox"/> 3/8" <input type="checkbox"/> 1/2" or more Features: <input type="checkbox"/> Low-E <input type="checkbox"/> Argon-filled <input type="checkbox"/> Suspended film Foundation Windows: <input type="checkbox"/> Vinyl <input type="checkbox"/> Metal</p>

B. Prescriptive Package Method (Skip this section if using the System Design Method of Sections C-F)

The prescriptive package method is the simplest method for determining compliance with the UDC insulation and window requirements. To use the prescriptive package method, enter your actual design values in the “Actual “ row below. **For a component, with two or more areas of different insulation levels, such as windows,** either use the least insulating value for both areas or use the Weighted Average tables below. Multiply your % glazing by the glazing U-value to obtain your "Glazing Factor". Find the Prescriptive Table that applies to your space heating fuel and sheathing type. Select a package from the table that most closely matches the construction indicated on your plans. **Do not exceed the package U-values or glazing factor or fall below the package R-values with your design.** Transfer the R-Values and U-values to the blank table below in the “Allowed” row. Then proceed to Section F. See page 2 for detailed instructions for this section.

	Package #	% glazing	U glazing	Glazing Factor (% glazing × U glazing)	R wall	R ceiling	R Bsmt, Crawl Space, Slab or Floor	U door	U overall	Equip. Eff.
Actual	-----	% (A.15)							-----	
Allowed		-----	-----	Max	Min	Min	Min	Max		

(Please go to Section F.)

Optional R-Value/U-Value Weighted Average Table for Component:

Component Construction Description	R Value	U-Value (1÷R Value)	Area (sq ft)	U-Value × Area (UA)
			Total Area =	Total UA =

$$\frac{\text{Total UA}}{\text{Total Area}} \div \frac{\text{Total Area}}{\text{Total UA}} = \text{(Weighted Average U-Value (for windows or doors))}$$

$$\frac{\text{Total Area}}{\text{Total UA}} \div \frac{\text{Total UA}}{\text{Total Area}} = \text{(Weighted Average R-Value (for all other components))}$$

Optional R-Value/U-Value Weighted Average Table for Component:

Component Construction Description	R Value	U-Value (1÷R Value)	Area (sq ft)	U-Value × Area (UA)
			Total Area =	Total UA =

$$\frac{\text{Total UA}}{\text{Total Area}} \div \frac{\text{Total Area}}{\text{Total UA}} = \text{(Weighted Average U-Value (for windows or doors))}$$

$$\frac{\text{Total Area}}{\text{Total UA}} \div \frac{\text{Total UA}}{\text{Total Area}} = \text{(Weighted Average R-Value (for all other components))}$$

C. Code-Allowed Heat Loss For System Design Method

Enter area values from Section A as notated and temperature differences per footnote 2 into this table and then multiply across by the electric or non-electric code-required U-value. Total the right column to find the total allowed heat loss factor.

Component	Area From Sect A.	× Required U-Value		= Heat Loss UA
		<input type="checkbox"/> NON-ELEC	<input type="checkbox"/> ELECTRIC	
1. Opaque Basement Wall [2]	(A.5.)	0.077	0.077	
2. Above Foundation Code Wall	(A.7.)	0.110	0.080	
3. Floor Over Interior Unconditioned Space	(A.9.)	0.050	0.050	
4. Roof or Ceiling	(A.10.)	0.026	0.020	
5. Floor Over Exterior	(A.11.)	0.033	0.033	
6. Crawl Space Wall	(A.12.)	0.060	0.060	
7. Slab On Grade[3] <input type="checkbox"/> Unheated <input type="checkbox"/> Heated	(A.13.) Lin. ft.	0.72 'F' 0.70 'F'	0.68 'F' 0.68 'F'	
8. Subtotal				
9. Credit for High Efficiency Heating Plant: 1.18 for furnace or boiler ≥90% AFUE; 1.15 for heat pump ≥ 7.8 HPSF, Otherwise use 1.0				×
10.	Total Code-Allowed Heat Loss Factor			

D. System Design Method - Actual 'U' Values Of Your Home's Components

D.1. Above-Foundation Components - If applicable, check the appropriate typical component constructions listed below, and use the pre-calculated U values. If your wall construction is not listed, you may obtain a pre-calculated U value from the default U-Value tables in the UDC Appendix. (Note that the default Table 2 Wood Frame U-values assume no insulating sheathing which penalizes you if your wall does have insulating sheathing, then you may need to use the Manual Calculation section below.) If you are using exterior metal framing, then you must use the Metal-Frame Wall U-Values of the UDC Appendix. If your component construction is not listed here or in the default tables, you need to use the Manual Calculation section below to manually enter R-values for the different layers of building materials from the Typical Thermal Properties of Building Materials Table of the UDC Appendix, ASHRAE Fundamentals Manual or manufacturer's specifications. Total them across and then obtain the U-value by taking the reciprocal (1/R) of the total R-value.

Above-Foundation Walls	<input type="checkbox"/> 2X4, 16" O.C., R-13 batt, R-1 board: U - .079	<input type="checkbox"/> 2X4, 16" O.C., R-13 batt, R-5 board: U - .061									
	<input type="checkbox"/> 2X6, 16" O.C., R-19 batt, R-1 board: U - .059	<input type="checkbox"/> 2X6, 16" O.C., R-19 batt, R-5 board: U - .049									
<input type="checkbox"/> Other - describe:	U - _____ from Default Table										
Roof or Ceiling	<input type="checkbox"/> 2X4 truss, 24" O.C., with R-38 insulation: U - .030	<input type="checkbox"/> 2X4 truss, 24" O.C., with R-52 insulation: U - .025									
	<input type="checkbox"/> 2X12 cathedral ceiling, 16" O.C., with R-38 insulation U - .027										
<input type="checkbox"/> Other - describe:	U - _____ from Default Table										
Floor Over Outside Air or Unconditioned Space	<input type="checkbox"/> 2X10 joists, 16" O.C., R-19 batt: U - .047										
<input type="checkbox"/> Other - describe:	U - _____ from Default Table										
Manual U-Value Calculation (if assembly not listed above)											
Component Name	Cavity Or Solid If Applicable	Ext. Air Film*	Ext. Finish	Insulation Over Framing	Sheathing	Framing Or Solid	Insulation Within Cavity	Interior Finish	Int. Air Film*	Total R-Value	U-Value (!/R)
	Cavity					-----					
	Solid						-----				
	Cavity					-----					
	Solid						-----				

* Air Film R-Values

Location	Heat Flow Direction		
	Upwards	Horizontal	Downwards
Exterior	.17	.17	.17
Interior	.61	.68	.92

D.2. Foundation And Slab-On-Grade Components - Check appropriate boxes for planned type of construction to determine pre-calculated overall 'U-value' including air films, wall, insulation, soil and cavity/solid differences. Slab on grade F-values are per lineal foot of slab perimeter.

Component Type	U-Value	
	Basement	Crawl Space
Foundation Wall		
<input type="checkbox"/> Masonry or concrete wall without insulation	0.360	0.477
<input type="checkbox"/> Masonry or concrete wall with R-5 insulation board for full height	0.115	0.136
<input type="checkbox"/> Masonry or concrete wall with R-10 insulation board or R-11 insulation batt and 2X4's for full height	0.072	0.081
<input type="checkbox"/> Permanent wood foundation with R-19 batt for full height	0.054	0.059
<input type="checkbox"/> Basement or crawl space floor without insulation	0.025	0.025
Slab-On-Grade (or within 12" of grade)	F-Value	
<input type="checkbox"/> Slab-on-grade without insulation	1.04	
<input type="checkbox"/> Slab-on-grade with R-5 insulation for 48" total horizontal and vertical application	0.74	
<input type="checkbox"/> Slab-on-grade with R-10 insulation board for 48" total application	0.68	

D.3. Windows And Doors - Use manufacturer's specifications for window and glazed door values, if they were determined per NFRC Std 100, to enter into Table E. Otherwise see default tables of UDC s. Comm 22.05 for U-values.

E. System Design Method - Calculated Envelope Heat Loss Factor Of Your Home

Enter values into table from elsewhere on this worksheet and multiply across to find the actual heat loss factor of each component. If using pre-calculated component U-values, **do not calculate separate cavity and solid figures or apply wood frame factors**. Total component heat loss factors in right column to find total envelope heat loss factors.

Component	Cavity Or Solid If Applicable	Area From Sect. A	× Wood Frame Factor**	× Actual 'U' Value From Sect. D	= Heat Loss Factor (UA)
Above-Foundation Windows	-----	(A.1.a.)	-----		
Foundation Windows	-----	(A.1.b)	-----		
Doors	-----	(A.2.c)	-----		
Opaque Basement Wall	-----	(A.5.)	-----		
Opaque Above-Foundation Wall	Cavity	(A.8.)			
	Solid				
Floor Over Unconditioned Spaces	Cavity	(A.9.)			
	Solid				
Roof or Ceiling	Cavity	(A.10.)			
	Solid				
Floor Over Outside Air	Cavity	(A.11.)			
	Solid				
Crawl Space Wall	-----	(A.12.)	-----		
Slab On Grade	-----	(A.13.)Lin. ft.	-----	F-Value	
Total Calculated Envelope Heat Loss Factor- Not to exceed Total Code Allowed Heat Loss Factor of line 10 of Section C. (Enter here: _____) by more than 1%					

** Adjustment Factors For Wood-Framed Components - Do not apply if your are using a pre-calculated or default U-Value.

Spacing Of Framing Members	Stud Walls		Joists/Rafters	
	Cavity	Solid	Cavity	Solid
12"	.70	.30	.86	.14
16"	.75	.25	.90	.10
24"	.78	.22	.93	.07

F. Heat Loss Factor Due to Air Infiltration (for heating equipment sizing)

Enter appropriate values. A maximum infiltration air change rate of 0.5 per hour is allowed in addition to exhaust fan ventilation losses.

Floor Level	Area (sq ft)	× Height (ft)	Fan Capacity (cfm)	× Constant	× Air Changes Per Hour	= Heat Loss Factor(UA)
Basement			-----	.018		
Level 1			-----	.018		
Level 2			-----	.018		
Level 3			-----	.018		
Exhaust Fan Ventilation	-----	-----		.432	-----	
Total Infiltration & Ventilation Heat Loss Factor						

G. Heating Equipment Sizing

Enter appropriate value to determine the maximum and minimum allowable heating equipment capacity in BTUs/HR. A more detailed calculation may be submitted to the local code official. [4]

Prescriptive Package Method:	$\frac{\text{U overall from selected Prescriptive Package of Section B}}{\text{Total Envelope Area (A.14.)}} =$	
OR System Design Method:	Calculated Heat Loss Factor from Sect. E.	
Infiltration & Ventilation Heat Loss Factor (from Sect. F.)		+
Total Heat Loss Factor (UA)		=
Temperature Difference from County Zone Table on page 1		×
Minimum Heating Equipment Output		=
Allowable Heating Equipment Size Margin Multiplier		× 1.15
Maximum Allowable Heating Equipment Output [5]		=
Planned Furnace Output Or Boiler IBR Rating		
Make & Model if High Efficiency Credit has been taken:		

Optional Uniform Dwelling Code (UDC) Makeup and Combustion Air Worksheet

Project Address _____ **Completed by:** _____ **Tel.** _____

Background: The UDC applies to all one and two family dwellings built since June 1, 1980. SPS 323.02 of the UDC requires that outside **makeup air** be supplied to balance mechanical exhaust ventilation, including required bathroom fans, so that adequate air change occurs, without backdrafting of open combustion heating appliances. SPS 323.06 of the UDC requires that adequate **combustion air** be supplied to heating appliances for complete fuel combustion and flue gas venting purposes, which should minimize carbon monoxide hazards. This worksheet demonstrates compliance with both requirements.

If your dwelling does not have any open combustion appliances, then you do not have any **combustion air** requirements and, by code, can rely upon infiltration through building cracks for **makeup air**. Open combustion appliances are those which use air from within the dwelling for combustion.

Notes: Typical appliance values are given in the tables, however use actual values if known. **Round pipe** has the following areas: 3" dia. pipe - 7 sq in, 4" - 12 sq in, 5" - 20 sq in, 6" - 28 sq in, 8" - 50 sq in, 10" - 79 sq in, 12" - 113 sq in. **Opening Restrictions:** If louvers or screening is provided on an opening, then multiply its area by the following factors: 1.0 for 1/4" hardware cloth, 0.8 for 1/8" screen, 0.75 for metal louvers, 0.5 for metal louvers and 1/8" screen, and 0.25 for wood louvers.

A. Makeup Air - Complete the following table for exhaust fans, but not recirculating, whole house fans, attic fans or inlets of balanced ventilation systems.

Intermittent Exhaust Fans	Typical Exhaust CFM	OR Actual CFM	Number	Total (cfm)
Bathroom fan (min. 50 cfm)	75		x	
Resid. kitchen range hood	180		x	
Downdraft range exhaust	400		x	
Electric clothes dryer	175		x	
Gas clothes dryer	150		x	
SubTotal				
Intermittency Adjustment Factor				X .40
Adjusted Total				
Any constant exhaust fans without dedicated makeup air				+
Grand Total				

You can provide makeup air via the following methods (check appropriate boxes). Note that openings or ducts shall be provided between the source of the makeup air and the exhaust fans.

- **Intake fans with a capacity equal to the Grand Total above** . If ducts are connected to the fan, the fan capacity shall be appropriately adjusted.
- **Openings to the outside, ducted to the return plenum of the furnace** to provide tempering and distribution. Multiply the Grand Total by the appropriate factor for louvers or screening to obtain the gross makeup air required:

_____ (Net Grand Total Makeup Air Required) ÷ _____ (Opg Restr. Factor) = _____ (Adjusted Makeup Air Req'd)

The calculated capacity for round intake duct is: 3" - 38 cfm; 4" - 69 cfm; 6" - 157 cfm; 8" - 279 cfm (Circle planned size).

Section SPS 322.14 requires outside makeup air openings to have manual shutoff means and automatic or gravity dampering means for periods when no makeup air is required. Because of this dampering requirement, you may **not** use makeup air openings for combustion air openings, which are prohibited to have dampers.

B. Combustion Air (Note that appliance manufacturer requirements may be more restrictive.)

There are several methods of providing combustion air, of which you will choose one for each group of appliances in a common space. First, complete the table for **open combustion appliances** on the next page to determine if you can comply with method 1, below, which allows the air to be drawn from inside the dwelling. Otherwise, choose another method from the next page.

1. Inside Air (Discontinuous Vapor Barrier): Allows combustion air to be drawn from an inside space if the building has a discontinuous vapor barrier, as is permitted at box sills by SPS 322.22. The space shall provide a room volume of at least 50 cubic feet per 1000 btu/hr combined input rating of all open combustion appliances in that space. **Room Interconnection :** An inside space may include several rooms if connected with **high and low openings**, with each opening providing one square inch of clear opening per 1,000 btu/hr input rating, but not less than 100 square inches each. Remember to apply the above Opening Restriction Factors for louvers on the openings.

Sq. In Req'd at Input/1,000: _____ (Min. 100 sq. in.) ÷ _____ (Opg. Restr. Factor) = _____ sq. in. **each opg** ;

Appliance	Appl. Group Number	Typical BTU/hr Input	Actual BTU/hr Input	Total BTU/hr in Each Numbered Group of Appliances That Share a Space	Room or Interconnected Space Volume	Room Volume Divided by [Total BTU/hr in Room , 1,000]*
Furnace Gas Other		100,000		Appl. Group 1		
Water heater Gas Oil		50,000		Appl. Group 2		
Gas clothes dryer		35,000				
Gas fireplace		50,000		Appl. Group 3		
Gas range		65,000				
Wood stove or fireplace (Input per Cu. Ft of firebox capacity)		100,000				

*If any room, or interconnected group of rooms, provide less than 50 cu ft per 1,000 BTU/hr of all appliances within, per the last column of the table, or the dwelling has a continuous vapor barrier, then choose one of the appropriate methods below. Enter the appliance group number in front of the applicable method. You can skip to Method 3 or 5 if the room is small and isolated.

Appl Group# **2. Inside & Outdoor Air (Continuous Vapor Barrier):** If dwelling has a continuous vapor barrier, and therefore cannot use method 1 of taking all air from inside, but per the above table has a room volume of at least 50 cubic feet per 1000 btu/hr combined appliance input rating, then provide supplemental outside air via a single, direct or ducted, exterior, high opening, sized at one square inch per 5,000 btu/hr combined input rating.

Exterior Opening:

Sq. Inches Required at Input/5,000: _____ ÷ _____ (Opg. Restr. Factor) = _____ sq. in.; Planned Opg. Dim. _____

Room Interconnection:

Sq. In Req'd at Input/1,000: _____ (Min. 100 sq. in.) ÷ _____ (Opg. Restr. Factor) = _____ sq. in. **each opg ;**

3. Single Outdoor Opening (Gas Appliances Only): If serving only gas appliances, then provide outdoor air via a single, direct or ducted, exterior, high opening sized at one square inch per 3,000 btu/hr combined input rating, but not smaller than the combined cross sectional areas of the appliance flue outlets in that space.

Appl Group# a. Sizes & areas of flue outlets: _____ Total flue area: _____ sq in.

b. Net Sq. In. Required at Input/3,000: _____ sq in

Greater of a. or b.: _____ ÷ _____ (Opg. Restr. Factor) = _____ sq. in.; Planned Opg. Dim. _____

Appl Group# **4. Prorated Inside Air Credit Plus Outdoor Air:** Calculate the pro-rated credit for an inside space that partially meets method 1, and then make up the difference by pro-rating the outside combustion air otherwise required by method 5. **Example:** If the inside space provides only 25 cubic feet per 1,000 btus (**per last column of table above**), or half of the size required by method 1, then the additional direct or ducted outside combustion air, as calculated by method 5 can be reduced by one half.

Pro-rating credit: **100%** - [_____ (Actual room vol. per 1000 BTU/hr) x 2] = _____

5. Two Outdoor Openings: Provide outdoor air via high and low, direct or vertically ducted, exterior openings, each sized at one square inch per 4,000 btu/hr combined input rating; or via horizontally ducted openings, each sized at one square inch per 2,000 btu/hr combined input rating.

Appl Group# Direct or Vertical Ducts: Sq In Required at Input/4,000: _____ sq in x _____ (Credit from 4.) = _____ sq in.

Horizontal Ducts: Sq In Required at Input/2,000: _____ sq in x _____ (Credit from 4.) = _____ sq in.

Net Sq. Inches Required: _____ ÷ _____ (Opg. Restr. Factor) = _____ sq. in.; Planned Opg. Dim. _____

Standard Erosion Control Plan for 1- & 2-Family Dwelling Construction Sites

According to Chapters SPS 320 & 321 of the Wisconsin Uniform Dwelling Code, soil erosion control information needs to be included on the plot plan which is submitted and approved prior to the issuance of building permits for 1- & 2-family dwelling units in those jurisdictions where the soil erosion control provisions of the Uniform Dwelling Code are enforced. This Standard Erosion Control Plan is provided to assist in meeting this requirement.

Instructions:

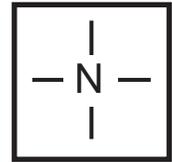
1. Complete this plan by filling in requested information, completing the site diagram and marking appropriate boxes on the inside of this form.
2. In completing the site diagram, give consideration to potential erosion that may occur before, during, and after grading. Water runoff patterns can change significantly as a site is reshaped.
3. Submit this plan at the time of building permit application.

PROJECT LOCATION _____

BUILDER _____ OWNER _____

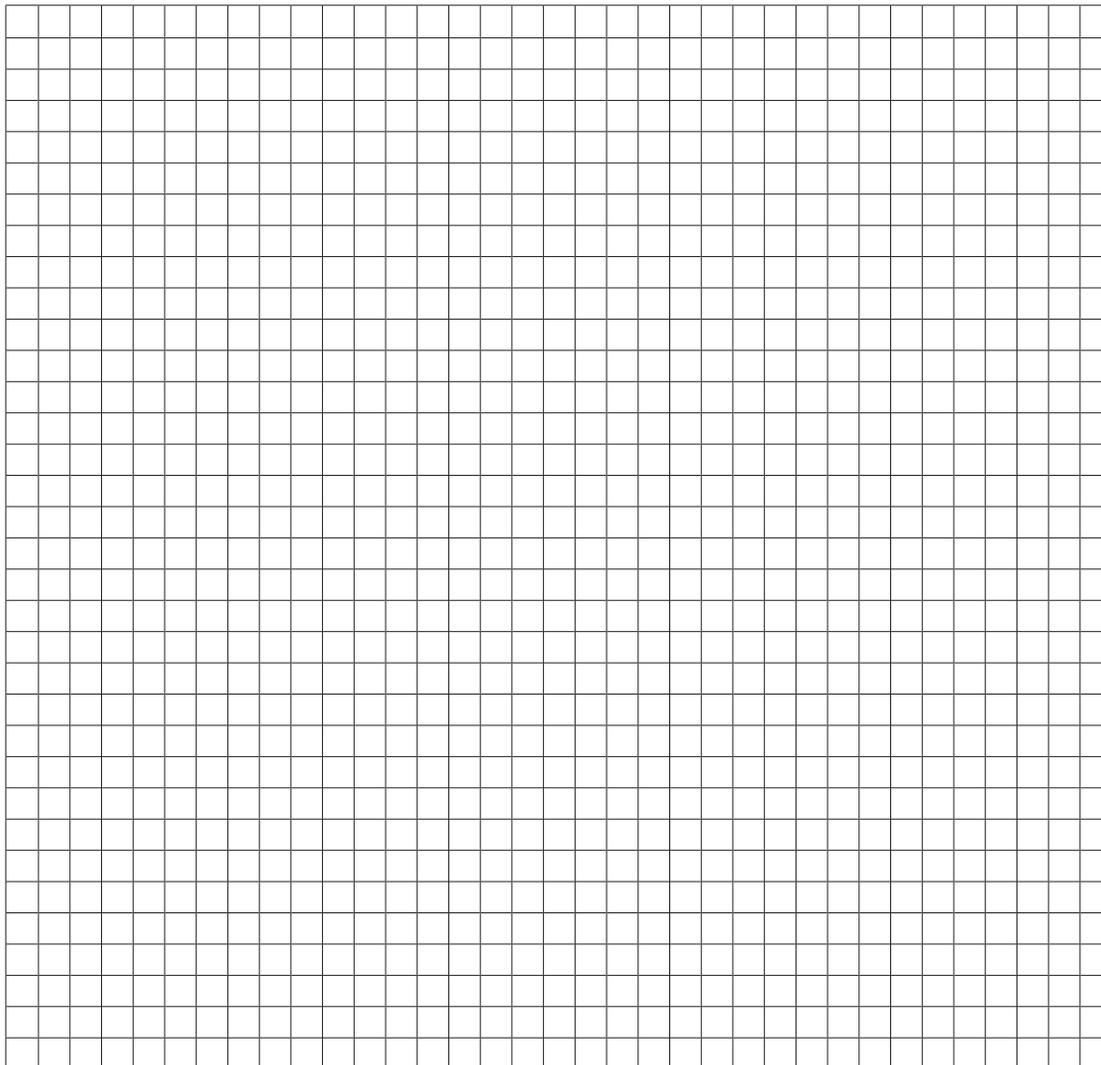
WORKSHEET COMPLETED BY _____ DATE _____

Please indicate north by completing the arrow.



SITE DIAGRAM

Scale: 1 inch = ____ feet



EROSION CONTROL PLAN LEGEND

--- PROPERTY LINE

—> EXISTING DRAINAGE

—> TD TEMPORARY DIVERSION

—> FINISHED DRAINAGE

--- LIMITS OF GRADING

—■— SILT FENCE

—●— STRAW BALES

GRAVEL

VEGETATION SPECIFICATION

TREE PRESERVATION

STOCKPILED SOIL

COMPLETED

NOT APPLICABLE

EROSION CONTROL PLAN CHECKLIST

Check (✓) appropriate boxes below, and complete the site diagram with necessary information.

Site Characteristics

- | | | |
|--------------------------|--------------------------|--|
| <input type="checkbox"/> | <input type="checkbox"/> | North arrow, scale, and site boundary. Indicate and name adjacent streets or roadways. |
| <input type="checkbox"/> | <input type="checkbox"/> | Location of existing drainageways, streams, rivers, lakes, wetlands or wells. |
| <input type="checkbox"/> | <input type="checkbox"/> | Location of storm sewer inlets. |
| <input type="checkbox"/> | <input type="checkbox"/> | Location of existing and proposed buildings and paved areas. |
| <input type="checkbox"/> | <input type="checkbox"/> | The disturbed area on the lot. |
| <input type="checkbox"/> | <input type="checkbox"/> | Approximate gradient and direction of slopes before grading operations. |
| <input type="checkbox"/> | <input type="checkbox"/> | Approximate gradient and direction of slopes after grading operations. |
| <input type="checkbox"/> | <input type="checkbox"/> | Overland runoff (sheet flow) coming onto the site from adjacent areas. |

Erosion Control Practices

- | | | |
|--------------------------|--------------------------|--|
| <input type="checkbox"/> | <input type="checkbox"/> | Location of temporary soil storage piles.
Note: Soil storage piles should be placed behind a sediment fence, a 10 foot wide vegetative strip, or should be covered with a tarp or more than 25 feet from any downslope road or drainageway. |
| <input type="checkbox"/> | <input type="checkbox"/> | Location of access drive(s).
Note: Access drive should have 2 to 3 inch aggregate stone laid at least 7 feet wide and 6 inches thick. Drives should extend from the roadway 50 feet or to the house foundation (whichever is less). |
| <input type="checkbox"/> | <input type="checkbox"/> | Location of sediment controls (filter fabric fence, straw bale fence or 10-foot-wide vegetative strip) that will prevent eroded soil from leaving the site. |
| <input type="checkbox"/> | <input type="checkbox"/> | Location of sediment barriers around on-site storm sewer inlets. |
| <input type="checkbox"/> | <input type="checkbox"/> | Location of diversions.
Note: Although not specifically required by code, it is recommended that concentrated flow (drainageways) be diverted (re-directed) around disturbed areas. Overland runoff (sheet flow) from adjacent areas greater than 10,000 sq. ft. should also be diverted around disturbed areas. |
| <input type="checkbox"/> | <input type="checkbox"/> | Location of practices that will be applied to control erosion on steep slopes (greater than 12% grade).
Note: Such practices include maintaining existing vegetation, placement of additional sediment fences, diversions, and re-vegetation by sodding or seeding with use of erosion control mats. |
| <input type="checkbox"/> | <input type="checkbox"/> | Location of practices that will control erosion on areas of concentrated runoff flow.
Note: Unstabilized drainageways, ditches, diversions, and inlets should be protected from erosion through use of such practices as in-channel fabric or straw bale barriers, erosion control mats, staked sod, and rock rip-rap. When used, a given in-channel barrier should not receive drainage from more than two acres of unpaved area, or one acre of paved area. In-channel practices should not be installed in perennial streams (streams with year round flow). |
| <input type="checkbox"/> | <input type="checkbox"/> | Location of other planned practices not already noted. |

COMPLETED

NOT APPLICABLE

Indicate management strategy by checking (✓) the appropriate box.

Management Strategies

Temporary stabilization of disturbed areas.

Note: It is recommended that disturbed areas and soil piles left inactive for extended periods of time be stabilized by seeding (between April 1 and September 15), or by other cover, such as tarping or mulching.

Permanent stabilization of site by re-vegetation or other means as soon as possible (lawn establishment).

- Indicate re-vegetation method: Seed Sod Other _____
- Expected date of permanent re-vegetation: _____
- Re-vegetation responsibility of: Builder Owner/Buyer
- Is temporary seeding or mulching planned if site is not seeded by Sept. 15 or sodded by Nov. 15? Yes No

Use of downspout and/or sump pump outlet extensions.

Note: It is recommended that flow from downspouts and sump pump outlets be routed through plastic drainage pipe to stable areas such as established sod or pavement.

Trapping sediment during de-watering operations.

Note: Sediment-laden discharge water from pumping operations should be ponded behind a sediment barrier until most of the sediment settles out.

Proper disposal of building material waste so that pollutants and debris are not carried off-site by wind or water.

Maintenance of erosion control practices.

- Sediment will be removed from behind sediment fences and barriers before it reaches a depth that is equal to half the height of the barrier.
- Breaks and gaps in sediment fences and barriers will be repaired immediately. Decomposing straw bales will be replaced (typical bale life is three months).
- All sediment that moves off-site due to construction activity will be cleaned up before the end of the same workday.
- All sediment that moves off-site due to storm events will be cleaned up before the end of the next workday.
- Access drives will be maintained throughout construction.
- All installed erosion control practices will be maintained until the disturbed areas they protect are stabilized.

EROSION CONTROL REGULATIONS

Erosion control and stormwater regulations can be complex. Local, state and, in some cases, federal regulations may apply. Before construction make sure you have the appropriate permits.

LOCAL ORDINANCES

Check with your county, city, village, or town for any local erosion control ordinances including shoreland zoning requirements. Except for new 1- & 2-family dwellings, local ordinances may be more strict than state regulations. They may also require erosion control on construction projects not affected by state or federal regulations.

UNIFORM DWELLING CODE (DEPT. OF COMMERCE)

CONTROLS REQUIRED

- Silt fences, straw bales, or other approved perimeter measures along downslope sides and side slopes.
- Access drive.
- Straw bales, filter fabric fences or other barriers to protect on-site sewer inlets.
- Additional controls if needed for steep slopes or other special conditions.

FOR MORE INFORMATION, CONTACT:

- Local building inspector
- Department of Commerce, Safety and Buildings Division, P.O. Box 7970, Madison, Wis. 53707-7970, (608) 267-5113.

STORMWATER PERMIT (DEPT. OF NATURAL RESOURCES)

CONTROLS REQUIRED

- Erosion control measures specified in the *Wisconsin Construction Site Best Management Practice Handbook*.
- Measures to control storm water after construction.

FOR MORE INFORMATION, CONTACT

- Department of Natural Resources, Storm Water Permits, P.O. 7921, Madison, WI 53707-7921, (608) 267-7694.

For more assistance on plan preparation, refer to the Wisconsin Uniform Dwelling Code, the DNR *Wisconsin Construction Site Best Management Handbook*, and UW-Extension publication *Erosion Control for Home Builders*. The *Wisconsin Uniform Dwelling Code* and the *Wisconsin Construction Site Best Management Handbook* are available through the State of Wisconsin Document Sales, (608) 266-3358.

Erosion Control for Home Builders (GWQ001) can be ordered through Extension Publications, (608) 262-3346 or the Department of Commerce, (608) 267-4405. A PDF version of *Erosion Control for Home Builders* (GWQ001) and *Standard Erosion Control Plan* are also available at <http://clean-water.uwex.edu/pubs/sheets>

This publication is available from county UW-Extension offices or from Extension Publications, 45 N. Charter St., Madison, WI 53715. (608) 262-3346 or toll-free (877) 947-7827. A publication of the University of Wisconsin-Extension in cooperation with the Wisconsin Department of Natural Resources and the Wisconsin Department of Commerce.



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GWQ001A Standard Erosion Control Plan for 1 & 2 Family Dwelling Construction Sites

DNR WT-458-96

R-03-02-2M-10-S

Editing and design by the Environmental Resources Center, University of Wisconsin-Extension.



NEC Standard Electrical Load Calculation for Single Family Dwellings
(Only for Service Ratings of 120/240V, 225 Amps Max)

Owner: _____ Location: _____

Total Floor Area of Dwelling (NEC 220.12) _____ SQFT.

Factor	Quantity			Volt Amperes (VA)
“General Lighting”				
1. General Lighting (SQFT X 3 VA/SQ FT (Table 220.12)	3 X	sqft		
2. Small Appliance Circuits (1500 VA per circuit) (NEC 220.52(A)) (minimum 2)	1500 X			
3. Laundry Circuit (1500 VA per circuit) (NEC 220.52(B))	1500 X			
4. Total General Lighting Load (Add lines 1, 2 & 3):				
5. First 3000 VA @ 100%:				3000
6. Total General Lighting Load – 3000 = _____ @ 35%=				
7. Net General Lighting Load (Per NEC 220.42) (Add lines 5 & 6):				
*Fixed Appliances(if insufficient space, use back):				
	YES	NO		
• Garbage Disposal				
• Bathroom Fan				
• Microwave				
• Dishwasher				
• Other:				
• Other:				
				Total
8. 3 or less Appliances, Total Appliance VA; 4 or more Appliances, 75% of Total Appliance VA (NEC 220.53):				
*Other Loads (including motors, EV charger(s), etc.)				
	YES	NO		Nameplate Rating (VA)
9. Electric Range (8000VA or Nameplate)**				
10. HVAC				
11. Electric Oven				
12. Electric Dryer (5000 VA minimum)**				
13. Electric Vehicle Charger				
14. Other:				
15. Other:				
16. 25% of largest motor (NEC 430.24)				
Total Service Load Volt-Amperes (VA) (Add lines 7, 8 & 9 thru 16) =				
Total Service Load Volt-Amperes / 240-volts = Amperes				
***Service Rating (Amperes)=				

* For every “YES” answer, indicate VA rating of equipment

** Nameplate rating must be used if larger

*** Service Rating shall be greater than or equal to the Service load