

BEAR CREEK TOWNSHIP BUILDING DEPARTMENT

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Off-Site Built Structures & Buildings used for Sheds, Cabins, Play Structures and More (other than those exempted through State or HUD Approved factory inspection programs)

Off-site built structures, such as sheds, small storage buildings, small cabin type buildings, etc., as well as shipping container conversions, that are constructed at a property other than where they will be located, are becoming very popular. These types of structures can be built and completed off site, hauled to the property where they are to be located, and set up in a very short time, ready to use and occupy, many times with minimal disturbance and construction at the final location. As with many buildings and structures, permits and inspections are required when not exempted by the codes. Code requirements for these structures and buildings can vary, and are based on use and size. This list of common questions on these types of buildings is provided below, along with answers. These are provided to give easy access to guidance and clarification to the common questions and concerns with these types of small structures and buildings. Commonly asked questions for these types of structures and buildings include:

- *Are building permits required?*
- *Are permits required for electrical, mechanical and plumbing installations?*
- *Do I need licensed contractors for my construction project?*
- *Are there limits on how a building or structure can be used?*
- *My building was completely constructed and finished and is being moved onto my property, so how does the building code apply to this finished building?*
- *Can I use my off-site built shed structure as a cabin?*
- *Are plans required to be submitted with a building permit application?*
- *How are the permit fees calculated for off-site buildings and structures?*
- *What kind of inspections need to take place?*
- *What are the foundation requirements for these types of structures and buildings?*
- *Are off-site built structures and buildings exempt from permits and approvals if left on a trailer or wheels?*
- *Are off-site built structures and buildings required to be anchored to the foundation or the ground?*
- *Are there specific structural load requirements that need to be met?*
- *Does my building need to meet the requirements of the Michigan Energy Code?*

Are building permits required? The following should be used as a guide for such a determination:

- Detached Accessory to a single or two family dwelling on the same property – 200 square feet and smaller can be exempted from a building permit.
- Detached Accessory to a building other than residential single or two family dwelling on the same property- 120 square feet and smaller can be exempted from a building permit.
- If no building exists on a property, and there is nothing for a building or structure to be accessory to, the building or structure, regardless of size, is not considered as exempt from a building permit, with exception of some agricultural use buildings. Agricultural use buildings should be discussed with the code official to determine whether exemption applies, and what the process is for that approval.

In order to answer that question completely, a number of variables come into play to make a determination. Small buildings and structures such as sheds, playhouses, etc. can be considered as accessory structures when the property on which they will be located contains another building that is considered the principal structure or building on the property. In other words, a property with a dwelling on it, can have other buildings on the property that can be considered as accessory to the dwelling. If there are no other buildings on a vacant property, then there is nothing for a small structure to be accessory to, therefore the building cannot be considered an accessory building.

Once it has been determined whether or not a building can be considered an accessory building, the answer to the question "are permits required" relies on building size for the answer. The building code indicates that residential accessory buildings under 200 square feet in area can be considered as exempt from a building permit. Buildings accessory to uses other than single family and duplex dwellings are limited to not more than 120 square feet in area to be considered for exemption. It is important to remember, the building must be accessory to another in order to be considered exempt from a building permit. As such, "are permits required" can be answered in a number of ways.

In addition to a building permit, other permits and approvals may be required. Those permits can include zoning, soil and erosion if excavation occurs within 500 feet of a body of water such as a lake, river or stream; health department well and septic unless municipal services are available - if the building is being used as a dwelling or habitable space, driveway permit/approval (if accessed from county or state roads), and/or critical dune and/or wetlands permit(s) if in such an area (issued through the State of Michigan) where these conditions exist.

To avoid construction delays, it is advised that the property owner verify any possible permits and/or approvals required and obtain those permits and/or approvals in advance of application for a building permit. The building permit will not be issued until all other permit issuing agencies have granted permits and/or approvals.

Are permits required for electrical, mechanical and plumbing installations? Any installations involving these trades will likely require a permit in each as well. For example, a storage building, an electrical permit will be required for the installation of electrical components such as lights, outlets, and sub panels. If the building or structure is to be used as a dwelling unit, living space or habitable space, all trade permits need to be considered as necessary. The electrical permit covers the installation of all electrical components in the building. The plumbing permit covers a water and drain pipe installations as well as the plumbing fixtures. The mechanical permit covers heating, cooling, ventilation, gas lines, and fuel and solid fuel burning appliances.

Do I need licensed contractors for my construction project? If you are having an off-site built structure delivered and set up on your site, you may obtain a building permit as the owner without involving a licensed contractor. That being said, any further on site construction on that structure may require a licensed contractor(s). The licensing laws in the state of Michigan that apply to construction related trades include Public Act 299 of 1980 (The Occupational Code), which is used for the licensing of residential builders, and Public Act 407 of 2016, which regulates the electrical, mechanical and plumbing trades. Both of these public acts allow a property owner to obtain permits and perform the construction as long as they are doing the work themselves and for their own occupancy, and the building will not be used as a rental property. If hiring others to perform the work, those people being hired do need to be licensed. Persons in violation of these public acts are subject to prosecution for working without the required licenses, for aiding and abetting an unlicensed person, and/or for obtaining permits under false pretenses.

Are there limits on how a building or structure can be used? When applying for a building permit, the applicant is required to provide information on how a building or structure is intended to be used. The use group described on the permit application provides guidance on how the code may apply based on the intended use. When a building is being used in a way other than what has been approved for, additional code requirements may apply. When this happens, the building undergoes a change in use. A change in use permit is then required. Buildings found to be exceeding the approved use will be required to obtain a change in use permit and approvals.

My building was completely constructed and finished and is being moved onto my property, so how does the building code apply to this finished building? Whether built off site or on site, the requirements of the code still apply. If the building is constructed as a shell only, and all components of the construction are still visible for inspection, then a site inspection to verify code compliance can be completed before finish materials are installed.

Buildings completely finished off site still need to be inspected during the construction of those buildings, and verified as code compliant through the local building department where that construction occurs. Emmet County will request copies of permits and inspection approvals for off-site built with finished interiors that are being moved into the county. Lack of written support documentation showing code compliance with the off-site construction will result in the need to remove finish materials for inspection of the building components that have been concealed behind finish materials.

Can I use my off-site built shed structure as a cabin? If a structure is planned to be used as a living, habitable or dwelling space, the code requirements for that type of a use do apply. All of the code requirements that apply to the intended use will apply to your building. Those requirements include, but are not limited to, minimum floor area, minimum ceiling height, light, heat, ventilation, cooking facilities, sanitation, toilet and bathing facilities, fixture clearances, egress and emergency escape and rescue, stair construction, handrails and guardrails, smoke and carbon monoxide detection, interior finish materials, etc. Be sure to discuss your planned use of your building with your local building inspection department so that you can avoid having to revise your plans unexpectedly.

Are plans required to be submitted with a building permit application? The short answer is yes, plans are required. The regulations for construction in the State of Michigan require that plans be submitted for the construction of a structure or building, and that the plans be of sufficient clarity to show the details of the planned construction. Plans may be required to be signed and sealed by a registered design professional such as an engineer or architect, if the construction materials and/or methods being used are not specifically addressed in the building code, or if the code official finds that the construction materials and methods are questionable. The submitted plans become a part of the permanent record of the property and permit files, for future reference if necessary.

The Emmet County PZCR office requires that two sets of plans be submitted with the permit application. One set becomes the file set. The other set is reviewed for code compliance; is stamped and signed as approved with the plan review compliance list attached; is sent back to the permit applicant; and is to be available on site for reference by inspection staff if necessary.

How are the permit fees calculated for off-site buildings and structures? Building permit fees are based on use group and size (floor area, and yes, decks are included). So the larger the building, the higher the permit fee is. The building department fee schedule contains a dollar amount per square foot, which is used to determine an overall construction value. The construction value is then multiplied by what is known as a R Factor for one and two family residential and an O Factor for all other uses. The end result is the base fee for the construction. The base fee is added to the application and plan review fees with the end result being the total building permit fee. This fee calculation process is used for all new construction projects.

What kind of inspections need to take place? Typical inspections on a construction project include footing, foundation, framing, rough (all trades), insulation, and final. Other electrical, mechanical and plumbing inspections may be necessary based on the scope of the installations involved.

For simple shed type structures where minimal foundation work is necessary, the foundation, framing and final inspections can generally be completed at the same time. Other, more complex projects will likely require most of the listed inspections.

What are the foundation requirements for these types of structures and buildings? The foundation requirements of the code vary based on the size and use of the building. For example, a detached accessory building with a floor area of 600 square feet or less, with light frame construction and an eave height of no higher than 10 feet, can be constructed without a frost protected foundation. These buildings are typically supported with what is known as a turndown slab. Buildings being used as dwelling, living space and/or habitable space, such as those described on pages 1 and 2 do require frost protected foundations, with footings extending at least 42 inches below grade. Foundation types addressed by the code include pier, concrete block, poured wall, and wood framed. Footing sizes vary and are based on the foundation type, soil conditions, the size of the building structure, and the number of stories the building may have. Typical footing size for a single story accessory structure with a block or concrete wall foundation is 8 inches thick by 16 inches wide. Small detached accessory structures under 600 square feet in area, to be used for storage use only, may also be allowed to be placed on a packed crushed and compacted gravel base at least 6 inches thick, as long as the top soils have been removed prior to placement of the crushed stone.

Are off-site built structures and buildings exempt from permits and approvals if left on a trailer or wheels? The short answer is likely not exempt. All applicable land use ordinances still apply regardless of the tiny home being on a trailer or having wheels attached. The health department still becomes involved for water and septic provisions on the land. The Road Commission is still involved for a driveway approvals. Soil and erosion control still apply for areas near bodies of water. Critical dune and wetland requirements of the State of Michigan still apply. The building code provisions are still applicable, even when the structure or building are considered as portable.

Are off-site built structures and buildings required to be anchored to the foundation or the ground? Buildings and structures supported from a foundation are typically attached to the foundation by way of anchor bolts or anchor straps. Anchor bolts are required to be at least ½ inch diameter, embedded at least 7 inches into the concrete, and spaced no more than 6 feet on center and within 12 inches from the corner in each direction. Approved foundation straps are also allowed when installed per manufacturer's specifications. Other options for securing a structure or building to the ground include approved tie downs and auger type anchors, such as those used in mobile home installations. Any other desired method of anchorage needs to be approved by the code official prior to installation.

Are there specific structural load requirements that need to be met? All of the code requirements for wind load and structural stability are required to be complied with. These requirements include sufficient foundation, floor, wall and roof structure to transfer loads from the top to the bottom, or the roof to the foundation as well as sufficient wall bracing to resist wind load. The load requirements for wind load and roof construction do vary in the State of Michigan. What may work as roof structure in the southern part of the state may well be an issue up north.

The Michigan Residential Code contains the snow load requirements for roof construction. Emmet County is in a 70 psf snow load zone. Off-site built structures brought to Emmet County need to be designed and constructed to the requirements for a 70 psf snow load. A minimum wind load design to resist a 115 mph gust for 3 seconds should also be considered in the design and construction of a building or structure.

Does my building need to meet the requirements of the Michigan Energy Code? The Michigan Energy Code is part of the Michigan Residential Code, and applies to all buildings being conditioned. The term conditioned means heated, cooled, or both. The requirements of the Michigan Energy Code are meant to aid in the reduction of the use of fossil fuels for heating and cooling our buildings and structures by requiring a minimum amount of insulation to keep the heat in during the cold months, and keep the heat out during the warm months. When a building is planned to be conditioned, the energy code requirements are to be applied. Non-conditioned buildings are not required to comply with the energy code. However, if the building will be used as a dwelling unit, the building code requires a source of primary heat to be provided. Additionally, if a building is constructed as a non-conditioned building and a change in use of that building occurs, the energy code requirements then apply. In the lower peninsula of Michigan, the northern half is what is referred to as Zone 6A. As such, the Zone 6A requirements are applicable for the required insulation values. Those values include the following:

- Walls = R20 cavity insulation or a combination of R13 Cavity and R5 continuous foam sheathing.
- Roof/Ceiling = R49 cavity insulation, with exception for energy heal trusses that will allow for a full R38 to extend out to the exterior of the wall framing without compression of the insulation.
- Floors = R30 for framed floors; R10 for unheated slab floors for at least 48 inches horizontally and the depth of the slab vertically around the perimeter; and R10 for heated slabs for least 48 inches horizontally and R15 for the depth of the slab vertically around the perimeter and R5 under the remainder of the slab.
- Basements and crawlspaces = R19 cavity insulation or R15 continuous foam insulation.
- Doors and Windows = Maximum U Value of 0.32.

Keep in mind that insulation product R Values are reduced when not installed correctly. Batt insulation is made to fit certain depths of framing cavities. Trying to squeeze the insulation into a framing cavity smaller than it is made for will cause a reduction in R Value. For example, an R19 fiberglass batt is designed for a 2x6 wall. When squeezed into a 2x4 wall, the insulation value is reduced from R19 to R14 or less due to the compression of the fiberglass batt.

If you have more specific questions not answered in this guide, please contact your code enforcement professionals for further guidance. The people charged with enforcement of the codes, the land use and construction regulations are your best source for complete and accurate information. Department contact information can be found in the header at the top of page 1