AGENDA ITEM or FINAL CONTRACT REVIEW SUBMITTAL FORM

Agenda Item: Building Code; Tiny Home Appendix

Action Requested: Discussion

Parties to the Agreement:

Term Begins: **Term Ends:** **Grant Contract #:**

Summary:

Introduction of Appendix Q, Tiny Houses, of the 2018 edition of the IRC for adoption and use in addition to the currently adopted building codes.

Fiscal Impact:

Submitted by: Crystal Lambert **Submitter's Email Address:** clambert@gunnisoncounty.org

Finance Review: ○ Required ◉ Not Required

Comments:

Reviewed by: Discharge Date:

County Attorney Review: ◉ Required ○ Not Required

Comments:
ok db 6/21/19

Reveiwed by: GUNCOUNTY1\dBaumgarten Discharge Date: 6/21/2019 Certificate of Insurance Required Yes ○ No ◉

County Manager Review:

Comments:

Reveiwed by: GUNCOUNTY1\mbirnie Discharge Date: 6/21/2019

○ Consent Agenda ○ Regular Agenda ○ Worksession Time Allotted: 30 minutes

Agenda Date: 6/25/2019

Revised April 2015

Gunnison County Community Development Department

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June 25, 2019

TO: **Board of County Commissioners**

FROM: **Crystal Lambert, Building & Environmental Health Official**

SUBJECT: ***Appendix Q: Tiny Houses* of the *International Residential Code*, 2018 edition**

Purpose:
The purpose of this item is to introduce *Appendix Q: Tiny Houses* of the *International Residential Code* (IRC), *2018 edition*, for adoption and use in unincorporated Gunnison County and to discuss the significant changes in relation to the currently adopted and applied building codes for residential construction, which is the IRC, 2015 edition.

Background:
The past and current building codes for residential construction can be discouraging to tiny house designs. Building Office staff has worked with customers who would like to build a tiny house but are challenged with meeting the current building code requirements for stairs, ceiling height, lofts, and emergency escape and rescue opening requirements. Appendix Q: Tiny Houses of the IRC, 2018 edition, allows for relaxed requirements for dwellings that are 400 square feet or less in floor area.

The Gunnison County On-site Wastewater Treatment System Regulations currently allow a reduction in the sizing of a system for Tiny Houses. If a proposed dwelling is less than 400 square feet in floor area a system can be designed for one bedroom instead of the two bedroom minimum required for all other dwellings.

The approximate building permit fees for a 400 square foot dwelling are $740.00. That number is based on an estimated construction value (labor and materials) of $48,984. A Workforce Housing Linkage Fee is not assessed on residential construction less than 500 square feet in floor area.

Discussion of changes:
Appendix Q: Tiny Houses allows for specific requirements of the International Residential Code to be relaxed in dwellings 400 square feet or less. The specific requirements are the following:

- Minimum Ceiling Height:
  A reduction in ceiling height from 7’ to 6’8” in habitable areas and hallways.
  A reduction in ceiling height from 6’8” to 6’4” in bathrooms.
  A reduction in ceiling height from 7’ to 6’4” in kitchens.

- Access to habitable lofts:
  Stair: If a habitable level or loft is accessed by a stair, the following changes to the stair requirements are:
  <u>Stairway width:</u> A change from 31.5” to 20”.
  <u>Headroom height:</u> A change from 6’8” to 6’2”.

Tread depth and riser height: A change from requiring that treads have a minimum depth of 10” and a maximum riser height of 7.75” to the following formula:

1. The tread depth shall be 20 inches minus four-thirds of the riser height.
2. The riser height shall be 15 inches minus three-fourths of the tread depth. Riser heights shall be between 7” and 12”.

Ladders, alternating tread devices, and ships ladders: A change to allow the use of ladders, alternating tread devices, and ships ladders to access a habitable loft level.

- Emergency Escape and Rescue Openings:
  A change to allow the required egress opening to be located in the roof in habitable lofts.

Recommendation:
Staff is recommending adoption of *Appendix Q: Tiny Houses* of the *International Residential Code*, *2018 edition*, to be applied, along with the currently adopted *International Residential Code*, *2015 edition*, for the permitting and construction of dwellings 400 square feet or less in floor area.

Attachment A: *Appendix Q: Tiny Houses* of the *2018 International Residential Code*

Attachment A

APPENDIX Q

TINY HOUSES

This provisions contained in this appendix are not mandatory unless specifically referenced in the adopting ordinance.

User note:

About this appendix: *Appendix Q relaxes various requirements in the body of the code as they apply to houses that are 400 square feet in area or less. Attention is specifically paid to features such as compact stairs, including stair handrails and headroom, ladders, reduced ceiling heights in lofts and guard and emergency escape and rescue opening requirements at lofts.*

SECTION AQ101 GENERAL

AQ101.1 Scope. This appendix shall be applicable to *tiny houses* used as single *dwelling units*. *Tiny houses* shall comply with this code except as otherwise stated in this appendix.

SECTION AQ102 DEFINITIONS

AQ102.1 General. The following words and terms shall, for the purposes of this appendix, have the meanings shown herein. Refer to Chapter 2 of this code for general definitions.

EGRESS ROOF ACCESS WINDOW. A *skylight* or roof window designed and installed to satisfy the emergency escape and rescue opening requirements of Section R310.2.

LANDING PLATFORM. A landing provided as the top step of a stairway accessing a *loft*.

LOFT. A floor level located more than 30 inches (762 mm) above the main floor, open to the main floor on one or more sides with a ceiling height of less than 6 feet 8 inches (2032 mm) and used as a living or sleeping space.

TINY HOUSE. A *dwelling* that is 400 square feet (37 m^2) or less in floor area excluding *lofts*.

SECTION AQ103 CEILING HEIGHT

AQ103.1 Minimum ceiling height. *Habitable space* and hallways in *tiny houses* shall have a ceiling height of not less than 6 feet 8 inches (2032 mm). Bathrooms, toilet rooms and kitchens shall have a ceiling height of not less than 6 feet 4 inches (1930 mm). Obstructions including, but not limited to, beams, girders, ducts and lighting, shall not extend below these minimum ceiling heights.

Exception: Ceiling heights in *lofts* are permitted to be less than 6 feet 8 inches (2032 mm).

SECTION AQ104 LOFTS

AQ104.1 Minimum loft area and dimensions. *Lofts* used as a sleeping or living space shall meet the minimum area and dimension requirements of Sections AQ104.1.1 through AQ104.1.3.

AQ104.1.1 Minimum area. *Lofts* shall have a floor area of not less than 35 square feet (3.25 m^2).

AQ104.1.2 Minimum dimensions. *Lofts* shall be not less than 5 feet (1524 mm) in any horizontal dimension.

AQ104.1.3 Height effect on loft area. Portions of a *loft* with a sloped ceiling measuring less than 3 feet (914 mm) from the finished floor to the finished ceiling shall not be considered as contributing to the minimum required area for the loft.

Exception: Under gable roofs with a minimum slope of 6 units vertical in 12 units horizontal (50-percent slope), portions of a *loft* with a sloped ceiling measuring less than 16 inches (406 mm) from the finished floor to the finished ceiling shall not be considered as contributing to the minimum required area for the *loft*.

AQ104.2 Loft access. The access to and primary egress from *lofts* shall be of any type described in Sections AQ104.2.1 through AQ104.2.4.

AQ104.2.1 Stairways. Stairways accessing *lofts* shall comply with this code or with Sections AQ104.2.1.1 through AQ104.2.1.5.

AQ104.2.1.1 Width. Stairways accessing a *loft* shall not be less than 17 inches (432 mm) in clear width at or above the handrail. The width below the handrail shall be not less than 20 inches (508 mm).

AQ104.2.1.2 Headroom. The headroom in stairways accessing a *loft* shall be not less than 6 feet 2 inches (1880 mm), as measured vertically, from a sloped line connecting the tread or landing platform nosings in the middle of their width.

AQ104.2.1.3 Treads and risers. Risers for stairs accessing a *loft* shall be not less than 7 inches (178 mm) and not more than 12 inches (305 mm) in height. Tread depth and riser height shall be calculated in accordance with one of the following formulas:

1. The tread depth shall be 20 inches (508 mm) minus four-thirds of the riser height.
2. The riser height shall be 15 inches (381 mm) minus three-fourths of the tread depth.

AQ104.2.1.4 Landing platforms. The top tread and riser of stairways accessing *lofts* shall be constructed as a *landing platform* where the *loft* ceiling height is less

than 6 feet 2 inches (1880 mm) where the stairway meets the *loft*. The *landing platform* shall be 18 inches to 22 inches (457 to 559 mm) in depth measured from the nosing of the landing platform to the edge of the *loft*, and 16 to 18 inches (406 to 457 mm) in height measured from the *landing platform* to the *loft* floor.

AQ104.2.1.5 Handrails. Handrails shall comply with Section R311.7.8.

AQ104.2.1.6 Stairway guards. Guards at open sides of stairways shall comply with Section R312.1.

AQ104.2.2 Ladders. Ladders accessing *lofts* shall comply with Sections AQ104.2.1 and AQ104.2.2.

AQ104.2.2.1 Size and capacity. Ladders accessing *lofts* shall have a rung width of not less than 12 inches (305 mm), and 10-inch (254 mm) to 14-inch (356 mm) spacing between rungs. Ladders shall be capable of supporting a 200-pound (75 kg) load on any rung. Rung spacing shall be uniform within $^3/_8$ inch (9.5 mm).

AQ104.2.2.2 Incline. Ladders shall be installed at 70 to 80 degrees from horizontal.

AQ104.2.3 Alternating tread devices. Alternating tread devices accessing *lofts* shall comply with Sections R311.7.11.1 and R311.7.11.2. The clear width at and below the handrails shall be not less than 20 inches (508 mm).

AQ104.2.4 Ship's ladders. Ship's ladders accessing *lofts* shall comply with Sections R311.7.12.1 and R311.7.12.2. The clear width at and below handrails shall be not less than 20 inches (508 mm).

AQ104.2.5 Loft Guards. *Loft* guards shall be located along the open side of *lofts*. *Loft* guards shall be not less than 36 inches (914 mm) in height or one-half of the clear height to the ceiling, whichever is less.

SECTION AQ105
EMERGENCY ESCAPE AND RESCUE OPENINGS

AQ105.1 General. *Tiny houses* shall meet the requirements of Section R310 for emergency escape and rescue openings.

Exception: *Egress roof access windows* in *lofts* used as sleeping rooms shall be deemed to meet the requirements of Section R310 where installed such that the bottom of the opening is not more than 44 inches (1118 mm) above the *loft* floor, provided the egress roof access window complies with the minimum opening area requirements of Section R310.2.1.