INTERPRETATION REQUEST

FLOOR AREA RATIO FOR LIVING SPACE LOCATED BELOW GRADE

Code Sections:

- 20.06.564 (Definition-Coastal)
- 21.12.070.D (Medium Density Residential area of the Del Monte Forest)

Date:	July 15, 2008
Requested by:	Managers
Subject:	Calculating Floor Area Ratio (FAR)

What are the Questions?

When is building area included in calculating floor area ratio?

Short Answer:

1) Habitable areas located below grade and designed with a patio, terrace or similar areas are included in FAR.
2) Habitable areas located entirely below grade with minimum light and ventilation (light wells) pursuant to the Building Code are not counted as FAR.
3) Non-habitable areas located entirely below grade (garage, storage, mechanical, wine cellar, etc) are not counted as FAR.
4) All building areas (habitable or non-habitable) located entirely or partially above grade are included in the FAR.

See the graphic on page 2.

Note: All floor area, whether it is counted as FAR or not, shall be included as part of the building size in the project description.

Discussion:

Floor Area is defined to include all enclosed spaces within all buildings, finished basements, guesthouses, studios, garages, and carports. The definition of *Floor Area Ratio* (FAR) states that the enclosed *floor space* constructed and maintained entirely below ground, including garages, shall not be counted as *floor area*.

The intent of calculating FAR is to maintain a level of intensity for development of a site. While allowing development to go below grade helps allow development to meet height restrictions, excluding living area because it is located below grade does not meet the intent of this standard balancing the size of the home with the size of the lot.

Based on the intent of FAR, living space (habitable rooms) should be counted as floor area for the project regardless if the space is above or below grade. However, based on the Zoning Code definitions, there appears to be a desire by Monterey County to allow some flexibility. Planners can and should consult with the Building Services Department to define the minimum size of light well required for habitable spaces. If the project is designed with living space entirely below grade and with the minimum light well, then that area will not be counted in the FAR. In addition, non-habitable spaces that do not require light wells (e.g.; wine cellars, hallways, etc.) would not be counted in the FAR.

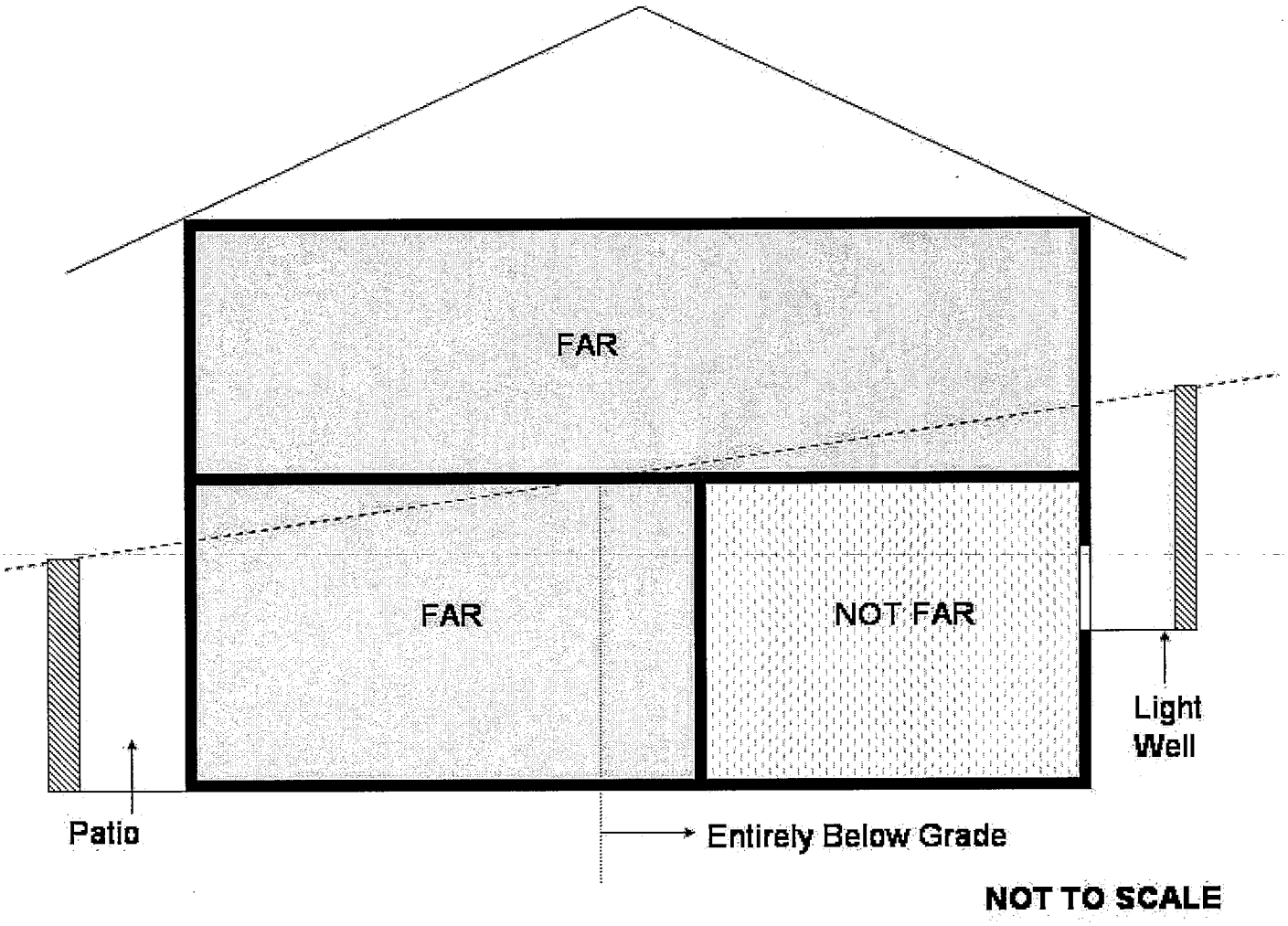
Indicators to watch for include patios, terraces, doors, stair cases, etc extending from a room on a lower level. A light well only needs to be open a short distance below the window with a metal fire escape ladder for emergency egress.

Facts of the situation:
Designers are using below grade terraces/patios and calling them light wells to create living space below the grade line, which results in increased development intensity on the site. This matter is also addressed in a separate interpretation for set backs of structures (e.g.; retaining walls) located below grade.

Interpretation Prepared By: Carl Holm, Assistant Director of Planning

Interpretation/Opinion Confirmed by Managers: _____
Mike Novo, Director

7/16/08
Date



of the glass-glazed unit skylight having the highest allowable design pressure.

2. In accordance with WDMA I.S.11.

SECTION R309
GARAGES AND CARPORTS

R309.1 Floor surface. Garage floor surfaces shall be of approved noncombustible material.

The area of floor used for parking of automobiles or other vehicles shall be sloped to facilitate the movement of liquids to a drain or toward the main vehicle entry doorway.

R309.2 Carports. Carports shall be open on not less than two sides. Carport floor surfaces shall be of approved noncombustible material. Carports not open on two or more sides shall be considered to be a garage and shall comply with the provisions of this section for garages.

The area of floor used for parking of automobiles or other vehicles shall be sloped to facilitate the movement of liquids to a drain or toward the main vehicle entry doorway.

Exception: Asphalt surfaces shall be permitted at ground level in carports.

R309.3 Flood hazard areas. Garages and carports located in flood hazard areas as established by Table R301.2 shall be constructed in accordance with Section R322.

R309.4 Automatic garage door openers. Automatic garage door openers, if provided, shall be listed and labeled in accordance with UL 325. *See Health and Safety Code Sections 19890, 19891 and 19892 for additional provisions for residential garage door openers.*

R309.5 Fire sprinklers *location on property.* Private garages shall be protected by fire sprinklers where the garage wall has been designed based on Table R302.1(2), Note a. Sprinklers in garages shall be connected to an automatic sprinkler system that complies with Section *R313*. Garage sprinklers shall be residential sprinklers or quick-response sprinklers, designed to provide a density of 0.05 gpm/ft^2. Garage doors shall not be considered obstructions with respect to sprinkler placement.

R309.6 Fire sprinklers, attached garages and carports with habitable space above. *Attached garages and carports with habitable space above shall be protected by fire sprinklers in accordance with this section and Section R313. Protection shall be provided in accordance with one of the following:*

1. *Residential sprinklers installed in accordance with their listing.*
2. *Extended coverage sprinklers discharging water not less than their listed flow rate for Light Hazard in accordance with NFPA 13.*
3. *Quick-response spray sprinklers at light hazard spacing in accordance with NFPA 13 designed to discharge at 0.05 gpm/ft^2 density (minimum).*

The system demand shall be permitted to be limited to the number of sprinklers in the compartment but shall not exceed two sprinklers for hydraulic calculation purposes. Garage doors shall not be considered obstructions and shall be permitted to be ignored for placement and calculation of sprinklers.

Exception: *An automatic residential fire sprinkler system shall not be required when additions or alterations are made to existing carports and/or garages that do not have an automatic residential fire sprinkler system installed in accordance with this section.*

R309.7 Extension garage door springs. *Every extension garage door spring sold or offered for sale, whether new or sold as a replacement, or installed in any garage or carport which is accessory to a dwelling covered by this code, shall conform to the requirements for garage door springs located in Section 1210 of the California Building Code.*

R309.8 Electric vehicle (EV) charging infrastructure. *Newly constructed one- and two-family dwellings and townhouses with attached private garages shall comply with EV infrastructure requirements in accordance with the California Green Building Standards Code, Chapter 4, Division 4.1.*

SECTION R310
EMERGENCY ESCAPE AND RESCUE OPENINGS

R310.1 Emergency escape and rescue opening required. Basements, habitable attics and every sleeping room shall have not less than one operable emergency escape and rescue opening. Where basements contain one or more sleeping rooms, an emergency escape and rescue opening shall be required in each sleeping room. Emergency escape and rescue openings shall open directly into a public way.

Exceptions *[SFM]*:

1. *Basements with a ceiling height of less than 80 inches (2032 mm) shall not be required to have emergency escape and rescue openings.*
2. *Emergency escape and rescue openings are not required from basements or sleeping rooms that have an exit door or exit access door that opens directly into a public way or to a yard, court or exterior egress balcony that opens to a public way.*
3. *Basements without habitable spaces and having not more than 200 square feet (18.6 m^2) in floor area shall not be required to have emergency escape and rescue openings.*
4. *Storm shelters are not required to comply with this section where the shelter is constructed in accordance with ICC 500.*
5. *Where the dwelling unit or townhouse unit is equipped with an automatic sprinkler system installed in accordance with Section R313, sleeping rooms in basements shall not be required to have emergency escape and rescue openings provided that the basement has one of the following:*
   - 5.1. *One means of egress complying with Section R311 and one emergency escape and rescue opening.*
   - 5.2. *Two means of egress complying with Section R311.*

R310.1.1 Operational constraints and opening control devices. Emergency escape and rescue openings shall be *maintained free of any obstructions other than those allowed by this section and shall be* operational from the inside of the room without the use of keys, tools or special knowledge. Window opening control devices and fall prevention devices complying with ASTM F2090 shall be permitted for use on windows serving as a required emergency escape and rescue opening and shall be not more than 70 inches (178 cm) above the finished floor. *The release mechanism shall be maintained operable at all times.*

Such bars, grills, grates or any similar devices shall be equipped with an approved exterior release device for use by the fire department only when required by the authority having jurisdiction.

Where security bars (burglar bars) are installed on emergency egress and rescue windows or doors, on or after July 1, 2000, such devices shall comply with California Building Standards Code, Part 12, Chapter 12-3 and other applicable provisions of this code.

R310.2 Emergency escape and rescue openings. Emergency escape and rescue openings shall have minimum dimensions in accordance with Sections R310.2.1 through R310.2.4.

R310.2.1 Minimum size. Emergency escape and rescue openings shall have a net clear opening of not less than 5.7 square feet (0.530 m^2).

Exception: The minimum net clear opening for grade-floor emergency escape and rescue openings shall be 5 square feet (0.465 m^2).

R310.2.2 Minimum dimensions. The minimum net clear opening height dimension shall be 24 inches (610 mm). The minimum net clear opening width dimension shall be 20 inches (508 mm). The net clear opening dimensions shall be the result of normal operation of the opening.

R310.2.3 Maximum height from floor. Emergency escape and rescue openings shall have the bottom of the clear opening not greater than 44 inches (1118 mm) *measured from* the floor.

R310.2.4 Emergency escape and rescue openings under decks, porches and cantilevers. Emergency escape and rescue openings installed under decks, porches and cantilevers shall be fully openable and provide a path not less than 36 inches (914 mm) in height and 36 inches (914 mm) in width to a yard or court.

R310.3 Emergency escape and rescue doors. Where a door is provided as the required emergency escape and rescue opening, it shall be a side-hinged door or a sliding door.

R310.4 Area wells. An emergency escape and rescue opening where the bottom of the clear opening is below the adjacent grade shall be provided with an area well in accordance with Sections R310.4.1 through R310.4.4.

R310.4.1 Minimum size. The horizontal area of the area well shall be not less than 9 square feet (0.9 m^2), with a horizontal projection and width of not less than 36 inches (914 mm). The size of the area well shall allow the emergency escape and rescue opening to be fully opened.

Exception: The ladder or steps required by Section R310.4.2 shall be permitted to encroach not more than 6 inches (152 mm) into the required dimensions of the area well.

R310.4.2 Ladder and steps. Area wells with a vertical depth greater than 44 inches (1118 mm) shall be equipped with an approved, permanently affixed ladder or steps. The ladder or steps shall not be obstructed by the emergency escape and rescue opening where the window or door is in the open position. Ladders or steps required by this section shall not be required to comply with Section R311.7.

R310.4.2.1 Ladders. Ladders and rungs shall have an inside width of not less than 12 inches (305 mm), shall project not less than 3 inches (76 mm) from the wall and shall be spaced not more than 18 inches (457 mm) on center vertically for the full height of the area well.

R310.4.2.2 Steps. Steps shall have an inside width of not less than 12 inches (305 mm), a minimum tread depth of 5 inches (127 mm) and a maximum *riser* height of 18 inches (457 mm) for the full height of the area well.

R310.4.3 Drainage. Area wells shall be designed for proper drainage by connecting to the building's foundation drainage system required by Section R405.1.

Exception: A drainage system for area wells is not required where the foundation is on well-drained soil or sand-gravel mixture soils in accordance with the United Soil Classification System, Group I Soils, as detailed in Table R405.1.

R310.4.4 Bars, grilles, covers and screens. Where bars, grilles, covers, screens or similar devices are placed over emergency escape and rescue openings, bulkhead enclosures or area wells that serve such openings, the minimum net clear opening size shall comply with Sections R310.2 through R310.2.2 and R310.4.1. Such devices shall be releasable or removable from the inside without the use of a key or tool or force greater than that required for the normal operation of the escape and rescue opening. *The release mechanism shall be maintained operable at all times.*

Such bars, grills, grates or any similar devices shall be equipped with an approved exterior release device for use by the fire department only when required by the authority having jurisdiction.

Where security bars (burglar bars) are installed on emergency egress and rescue windows or doors, on or after July 1, 2000, such devices shall comply with California Building Standards Code, Part 12, Chapter 12-3 and other applicable provisions of this code.

R310.5 Replacement windows for emergency escape and rescue openings. Replacement windows installed in buildings meeting the scope of this code shall be exempt from