

VARIANCE FEES

MGO \$50.00
COMM \$490.00
Priority – Double above

PETITION FOR VARIANCE APPLICATION

City of Madison
Building Inspection
Division
215 Martin Luther King Jr. Blvd.
Madison, WI 53703
(608) 266-4568

Amount Paid *\$490 M 5-12-15*

Name of Owner Jim Stoppie	Project Description 11 story apartment building with 12th story penthouse community and exercise spaces	Agent, architect, or engineering firm Knothe Bruce Architects, LLC
Company (if applies) Venture II		No. & Street 7601 University Ave. ste. 201
No. & Street 1202 Regent St.	Tenant name (if any)	City, State, Zip Code Middleton, WI 53562
City, State, Zip Code Madison, WI 53715	Building Address 619 Segoe Rd.	Phone (608) 836-3690
Phone (608) 268-4912	Madison, WI	Name of Contact Person Randy Bruce
e-mail jim@madisonproperty.com		e-mail rbruce@knothebruce.com

1. The rule being petitioned reads as follows: (Cite the specific rule number and language. Also, indicate the nonconforming conditions for your project.)
2009 IBC 1024.1; Approved luminous egress path markings delineating the exit path shall be provided in buildings of Groups A, B, E, I, M and R-1 having floors located more than 75 feet above the lowest level of fire department vehicle access...

2. The rule being petitioned cannot be entirely satisfied because:
See attached sheet

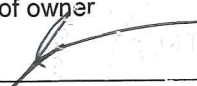
3. The following alternatives and supporting information are proposed as a means of providing an equivalent degree of health, safety, and welfare as addressed by the rule:
See attached sheet

Note: Please attach any pictures, plans, or required position statements.

VERIFICATION BY OWNER – PETITION IS VALID ONLY IF NOTARIZED AND ACCOMPANIED BY A REVIEW FEE AND ANY REQUIRED POSITION STATEMENTS.

Note: Petitioner must be the owner of the building. Tenants, agents, contractors, attorneys, etc. may not sign the petition unless a Power of Attorney is submitted with the Petition for Variance Application.

Jim Stoppie, being duly sworn, I state as petitioner that I have read the foregoing petition, that I believe it to be true, and I have significant ownership rights in the subject building or project.

Signature of owner 	Subscribed and sworn to before me this date: <i>4/22/15</i>
Notary public <i>Nancy E Guisone</i>	My commission expires: <i>7/5/15</i>

NOTE: ONLY VARIANCES FOR COMMERCIAL CODES ARE REQUIRED TO BE NOTARIZED.

2. The rule being petitioned cannot be entirely satisfied because:

The assembly A-3 penthouse spaces within this building are intended to be used by R-2 occupants - note that R-2 is not one of the groups required to have luminous markings. Since the intent of the code is to limit groups of occupants with high anticipated loads and occupants unfamiliar with the space the requirement is not applicable to our use. This position was shared by city of Madison plan reviewers and was confirmed with a plan reviewer and MFD in June of 2014; during the design phase of this project. Recently the city has changed its position on this interpretation and we now understand that our building would be required to have luminous egress markings. This building is scheduled to be completed in mid-July of 2015.

Available stick on or paint on glow in the dark illumination required by section 1024.1 have proven problematic from a maintenance and durability stand point. These are required on the nosing and handrails of the stairs which are the most abused parts of the stair system. Not knowing that these would be required we specified and have installed diamond plated metal treads and full landings which do not provide a good surface for adhering or attaching the luminous marking to.

3. The Following alternatives and supporting information are proposed as a means of providing an equivalent degree of health, safety, and welfare as addressed by the rule:

A.) The assembly spaces will be posted with a maximum occupancy for the exterior roof deck and interior community space of 150 total combined for the two spaces.

B.) Exit lighting and illumination lighting at the stairshafts will be on primary and emergency diesel generated power.

C.) A third means of illumination will be provided in the form of battery back-up lighting. These will be in both stairs stair shafts and provide full illumination, for a minimum of 90 minutes, of the full stair and landing areas extending from the penthouse level to the first floor exterior exit doors. These lights will provide a minimum of 8 foot candles to all parts of the stair enclosure, far above the minimum of 1 foot candle for means of egress illumination required by IBC. These will automatically illuminate when the primary and generator powered lighting is lost. Battery back-up lighting will be maintained and tested as required by NEC and the manufacturer recommendations of all battery operated emergency lighting. This system will provide a dependable form of exit path illumination and illuminate the full exit path vs only marking the path with glow in the dark markings.

D.) The penthouse level assembly areas will not be open to the general public and are within a secure building requiring card access or resident control of guest access from the 15 guest parking stalls. The assembly spaces are also located within an additional level of card access at the entry doors to the assembly spaces which will be automatically controlled to only be accessible during regular hours. In addition these spaces will not be allowed to be rented or reserved by non-staff or non-residents.

E.) The stair walls are constructed of poured concrete with a minimum 10" thickness the full height of one stair and to the 11th floor of the other stair which per IBC table 720.1 (2) provides a 4 hour fire rating. This provides a much safer and structurally secure stair wall system than what is required by code.

SECTION 1024 LUMINOUS EGRESS PATH MARKINGS

1024.1 General. *Approved luminous egress path markings delineating the exit path shall be provided in buildings of Groups A, B, E, I, M and R-1 having occupied floors located more than 75 feet (22 860 mm) above the lowest level of fire department vehicle access in accordance with Sections 1024.1 through 1024.5.*

Exceptions:

1. Luminous egress path markings shall not be required on the *level of exit discharge* in lobbies that serve as part of the exit path in accordance with Section 1027.1, Exception 1.
 2. Luminous egress path markings shall not be required in areas of *open parking garages* that serve as part of the exit path in accordance with Section 1027.1, Exception 3.
- ❖ Improved safety for individuals negotiating stairs during egress of a high-rise building is provided by improving the visibility of stair treads and handrails under emergency conditions. A second source of emergency power for exit illumination, exit signs and stair shaft pressurization systems in smokeproof enclosures is currently mandated for high-rise buildings. In the event of an emergency that disconnects utility power, the emergency power source should engage, causing the stair shaft to be illuminated and smoke free by the pressurization system. Unfortunately, such systems can fail under demand conditions. The provisions of Section 1024 add an additional level of safety to the egress path by requiring the installation of photoluminescent or self-illuminating marking systems which do not require electrical power and its associated wiring and circuits. An additional means for ensuring that occupants can safely egress a building via exit stairs is now available even if the emergency power supply and system fails to operate. **The groups indicated have a high anticipated occupant load or occupants may not be as familiar with the space.**

The exceptions indicate that if the exit stairway enclosure discharges through the lobby (see Section 1027.1, Exception 1), or the lowest level of an open parking garage (see Section 1027.1, Exception 3), the egress markings would not be required outside the stairway enclosure for the portion from the stairway enclosure to the door leading to the outside. If the exit stairway discharges through an exit passageway, or through a vestibule, the exit path markings must continue to the door leading to the outside.

1024.2 Markings within exit enclosures. Egress path markings shall be provided in *exit enclosures*, including vertical *exit enclosures* and *exit passageways*, in accordance with Sections 1024.2.1 through 1024.2.6.

- ❖ Egress path markings are required inside the exit stair/ramp enclosure for all floors. If the stairway connects to an exit passageway as part of the travel down to the level of exit discharge or on the level of exit dis-

charge, the path markings must also be continued in the exit passageway.

The subsections include marking the tread nosings, the surrounding edges of landings and any exit passageways, handrails and any protruding objects within the enclosure.

All exit path markings are required to be solid and continuous stripes. A key requirement for marking systems is that their design must be uniform. The placement and dimensions of markings must be consistent throughout the same exit enclosure. By specifying a standard marking dimension, the requirements will ensure that the marking is visible during dark conditions and provides consistent and standard application in the design and enforcement of exit path markings. Markings installed on stair steps, perimeter demarcation lines and handrails must have a minimum width of 1 inch (25 mm). For stair steps and perimeter demarcation lines, their maximum width cannot exceed 2 inches (51 mm). The provisions for stair steps, perimeter demarcation lines and handrails allow the width of the marking to be reduced to less than 1 inch (25 mm) when marking stripes are listed in accordance with UL 1994.

1024.2.1 Steps. A solid and continuous stripe shall be applied to the horizontal leading edge of each step and shall extend for the full length of the step. Outlining stripes shall have a minimum horizontal width of 1 inch (25 mm) and a maximum width of 2 inches (51 mm). The leading edge of the stripe shall be placed at a maximum of $\frac{1}{2}$ inch (13 mm) from the leading edge of the step and the stripe shall overlap the leading edge of the step by not more than $\frac{1}{2}$ inch (13 mm) down the vertical face of the step.

Exception: The minimum width of 1 inch (25 mm) shall not apply to outlining stripes *listed* in accordance with UL 1994.

- ❖ Stripes are required the full width of the stairway on all tread nosings and along the leading edge of stair landings. These demarcation lines serve to identify the transition from the stair steps to the landing, which is important to minimize the risk of a fall inside of a stairway enclosure that is not illuminated. In order to clearly identify the leading edge of the step, the front edge of the stripe must be within $\frac{1}{2}$ inch (13 mm) plus or minus of the leading edge or the tread (see Figure 1024.2.1).

The code does not specify any minimum slip-resistance requirements for luminous products installed on walking surfaces. However, Section 1003.4 does require all walking surfaces for means of egress to be slip resistant. Persons with vision impairments often rely on high contrast elements to delineate changes in elevation such as that required in Sections 1009.4.4 and 1028.11.2. In medium light conditions, the luminous materials may be hard to discern. Luminous materials installed adjacent to dark contrasting materials may help with both situations.

The provisions for stair steps, perimeter demarcation lines and handrails allow the width of the marking

TABLE 720.1(2)
RATED FIRE-RESISTANCE PERIODS FOR VARIOUS WALLS AND PARTITIONS ^{a, c, p}


MATERIAL	ITEM NUMBER	CONSTRUCTION	MINIMUM FINISHED THICKNESS FACE-TO-FACE ^b (Inches)			
			4 hour	3 hour	2 hour	1 hour
1. Brick of clay or shale	1-1.1	Solid brick of clay or shale ^c .	6	4.9	3.8	2.7
	1-1.2	Hollow brick, not filled.	5.0	4.3	3.4	2.3
	1-1.3	Hollow brick unit wall, grout or filled with perlite vermiculite or expanded shale aggregate.	6.6	5.5	4.4	3.0
	1-2.1	4" nominal thick units at least 75 percent solid backed with a hat-shaped metal furring channel 3/4" thick formed from 0.021" sheet metal attached to the brick wall on 24" centers with approved fasteners, and 1/2" Type X gypsum wallboard attached to the metal furring strips with 1"-long Type S screws spaced 8" on center.	—	—	5 ^d	—
2. Combination of clay brick and load-bearing hollow clay tile	2-1.1	4" solid brick and 4" tile (at least 40 percent solid).	—	8	—	—
	2-1.2	4" solid brick and 8" tile (at least 40 percent solid).	12	—	—	—
3. Concrete masonry units	3-1.1 ^e	Expanded slag or pumice.	4.7	4.0	3.2	2.1
	3-1.2 ^f	Expanded clay, shale or slate.	5.1	4.4	3.6	2.6
	3-1.3 ^f	Limestone, cinders or air-cooled slag.	5.9	5.0	4.0	2.7
	3-1.4 ^f	Calcareous or siliceous gravel.	6.2	5.3	4.2	2.8
4. Solid concrete ^{g, h}	4-1.1	Siliceous aggregate concrete.	7.0	6.2	5.0	3.5
		Carbonate aggregate concrete.	6.6	5.7	4.6	3.2
		Sand-lightweight concrete.	5.4	4.6	3.8	2.7
		Lightweight concrete.	5.1	4.4	3.6	2.5
5. Glazed or unglazed facing tile, nonload-bearing	5-1.1	One 2" unit cored 15 percent maximum and one 4" unit cored 25 percent maximum with 3/4" mortar-filled collar joint. Unit positions reversed in alternate courses.	—	6 1/8	—	—
	5-1.2	One 2" unit cored 15 percent maximum and one 4" unit cored 40 percent maximum with 3/4" mortar-filled collar joint. Unit positions side with 3/4" gypsum plaster. Two wythes tied together every fourth course with No. 22 gage corrugated metal ties.	—	6 1/4	—	—
	5-1.3	One unit with three cells in wall thickness, cored 29 percent maximum.	—	—	6	—
	5-1.4	One 2" unit cored 22 percent maximum and one 4" unit cored 41 percent maximum with 1/4" mortar-filled collar joint. Two wythes tied together every third course with 0.030" (No. 22 galvanized sheet steel gage) corrugated metal ties.	—	—	6	—
	5-1.5	One 4" unit cored 25 percent maximum with 3/4" gypsum plaster on one side.	—	—	4 3/4	—
	5-1.6	One 4" unit with two cells in wall thickness, cored 22 percent maximum.	—	—	—	4
	5-1.7	One 4" unit cored 30 percent maximum with 3/4" vermiculite gypsum plaster on one side.	—	—	4 1/2	—
	5-1.8	One 4" unit cored 39 percent maximum with 3/4" gypsum plaster on one side.	—	—	—	4 1/2

(continued)



Neighborhood Preservation & Inspection Division
 215 Martin Luther King, Jr. Boulevard
 P.O. Box 2984
 Madison, WI 53701-2984

POSITION STATEMENT:
 To be completed by Fire Marshall

NAME OF OWNER Jim Stoppie	BUILDING OCCUPANCY OR USE R-2 - Apartment building	AGENT, ARCHITECT OR ENGINEERING FIRM Knothe Bruce Architects, LLC
COMPANY Venture II	TENANT NAME, IF ANY	NO. & STREET 7601 University Ave. ste. 201
NO. & STREET 1202 Regent St.	BUILDING LOCATION, NO. & STREET 619 Segoe Rd.	CITY, STATE, ZIP CODE Middleton, WI 53562
CITY, STATE, ZIP CODE Madison, WI 53715	CITY, COUNTY Madison, WI	PHONE (608) 836-3690
1. I have read the petition for variance of rule:		
2. I RECOMMEND (check appropriate box): <input type="checkbox"/> Denial <input type="checkbox"/> Approval <input checked="" type="checkbox"/> Conditional Approval <input type="checkbox"/> No Comment*		
3. Explanation for Recommendation: <ul style="list-style-type: none"> • Battery operated emergency lighting provides an additional means to meet the intent of the code. • The assembly space is intended to be an accessory use for the apartment residents. The assembly space shall be used for the apartment residents while complying with all code provisions. • The assembly space shall not be used or rented by any other groups. <small>*If desired, Fire Departments may indicate "No Comment" on non-fire safety issues such as sanitary, energy conservation, structural, barrier free environments, etc.</small>		
4. <input type="checkbox"/> I find no conflict with local rules and regulations. <input type="checkbox"/> I find that the petition is in conflict with local rules and regulations.		
Explanation		
Signature of Fire Chief 		Date 5-11-15

Please complete and submit promptly to the Neighborhood Preservation & Inspection Division at the address shown above.