



STATE OF WASHINGTON
STATE BUILDING CODE COUNCIL

May 2018
Log No. _____

1. State Building Code to be Amended:

- | | |
|---|---|
| <input checked="" type="checkbox"/> International Building Code | <input type="checkbox"/> International Mechanical Code |
| <input type="checkbox"/> ICC ANSI A117.1 Accessibility Code | <input type="checkbox"/> International Fuel Gas Code |
| <input type="checkbox"/> International Existing Building Code | <input type="checkbox"/> NFPA 54 National Fuel Gas Code |
| <input type="checkbox"/> International Residential Code | <input type="checkbox"/> NFPA 58 Liquefied Petroleum Gas Code |
| <input type="checkbox"/> International Fire Code | <input type="checkbox"/> Wildland Urban Interface Code |
| <input type="checkbox"/> Uniform Plumbing Code | |

For the Washington State Energy Code, please see specialized [energy code forms](#)

Section(s): IBC 3116

Title: Fixed Guideway Transit – NFPA 130 Amendments (Fire separations and means of egress)

2. Proponent Name (Specific local government, organization or individual): Kym Williams

Proponent: Sound Transit

Title: Director, Permit Administration

Date: July 9, 2024

3. Designated Contact Person:

Name: Mark Murray, PE

Title: Principal Fire Engineer

Address: 401 S Jackson St. Seattle, WA 98104

Office Phone: (206-553-3899)

Cell: (206-553-3899)

E-Mail address: mark.murray@soundtransit.org

4. Proposed Code Amendment. Reproduce the section to be amended by underlining all added language, striking through all deleted language. Insert new sections in the appropriate place in the code in order to continue the established numbering system of the code. If more than one section is proposed for amendment or more than one page is needed for reproducing the affected section of the code, additional pages may be attached.

Clearly state if the proposal modifies an existing amendment or if a new amendment is needed. If the proposal modifies an **existing amendment**, show the modifications to the existing amendment by underlining all added language and striking through all deleted language. If a new amendment is needed, show the modifications to the **model code** by underlining all added language and striking through all deleted language.

Code(s) IBC **Section(s)** 1004, 3116.2

Amend sections to read as follows:

The following is an amendment to an **existing** amendment.

Table 1004

FUNCTION OF SPACE	OCCUPANT LOAD FACTOR*
Accessory storage areas, mechanical equipment room	300 gross
Agricultural building	300 gross
Aircraft hangars	500 gross
Airport terminal	
Baggage claim	20 gross
Baggage handling	300 gross
Concourse	100 gross
Waiting areas	15 gross
Assembly	
Gaming floors (keno, slots, etc.)	11 gross
Exhibit gallery and museum	30 net
Assembly with fixed seats	See Section 1004.6
Assembly without fixed seats	
Concentrated (chairs only-not fixed)	7 net
Standing space	5 net
Unconcentrated (tables and chairs)	15 net
Bowling centers, allow 5 persons for each lane including 15 feet of runway and for additional areas	7 net
Business areas	150 gross
Concentrated business use areas	See Section 1004.8
Courtrooms-other than fixed seating areas	40 net
Day care	35 net
Dormitories	50 gross
Educational	
Classroom area	20 net
Shops and other vocational room areas	50 net
Exercise rooms	50 gross
Fixed guideway transit and passenger rail systems	
Platform	400 gross See Section 3116
Concourse/lobby	See Section 3116 100 gross
Group H-5 fabrication and manufacturing areas	200 gross
Industrial areas	100 gross
Institutional areas	
Inpatient treatment areas	240 gross
Outpatient areas	100 gross
Sleeping areas	120 gross
Kitchens, commercial	200 gross
Library	
Reading rooms	50 net
Stack area	100 gross

Locker rooms	50 gross
Mall buildings-covered and open	See Section 402.8.2
Mercantile	60 gross
Storage, stock, shipping areas	300 gross
Parking garages	200 gross
Residential	200 gross
Skating rinks, swimming pools	
Rink and pool	50 gross
Decks	15 gross
Stages and platforms	15 net
Warehouses	500 gross
For SI: 1 foot = 304.8 mm, 1 square foot= 0.0929 m ²	

5.3.11 Means of egress lighting.

5.3.11.1 Illumination of the means of egress in stations, including escalators that are considered a means of egress, shall be in accordance with IBC Section 1008.

5.3.11.2 Means of egress, including escalators considered as means of egress, shall be provided with Exit Signs system of emergency lighting, in accordance with IBC Section 101308.

5.3.11.3 In addition to the requirements of Sections 5.3.11.1 and 5.3.11.2:

- (1) Lighting for stairs and escalators shall be designed to emphasize illumination on the top and bottom steps and landings.
- (2) Where newel- and comb-lighting is provided for escalator steps, such lighting shall be on emergency power circuits.

These are all **new** amendments to NFPA 130:

5.2.4.2* **Separation Between Public and Nonpublic Floor Areas.** All public areas shall be fire-separated from adjacent nonpublic areas in accordance with the International Building Code, Chapter 5-

5.2.4.5* Separation Between System and Nonsystem Occupancies.

All station public areas shall be fire separated from adjacent non-system occupancies in accordance with the International Building Code, Chapter 5-

5.3.8.5 Turnstile-type fare barriers in accordance with the International Building Code NFPA 101 shall be permitted in the means of egress and shall meet the following criteria:

- (1) Dimensions shall be in accordance with the requirements of the International Building Code NFPA 101.
- (2) Turnstiles that drop away from the egress opening under the conditions listed in 5.3.8.2 or 5.3.8.3 shall be credited with a capacity of 50 p/min for egress calculations.
- (3) Turnstiles that revolve freely in the direction of egress under the conditions listed in 5.3.8.2 shall meet the following criteria:
 - (a) Each unit shall be credited with a capacity of 25 p/min for egress calculations.
 - (b) The turnstiles shall not account for more than 50 percent of the required egress capacity for each egress route.

(4) Security access turnstiles shall meet the requirements of the International Building Code.

6.3.3.10 Exit stairs and doors shall comply with the International Building Code, Chapter 10, Chapter 7 of NFPA 101, except as herein modified.

6.3.5.12 Lighting systems for enclosed trainways shall be installed in accordance with the International Building Code, Section 1008 and 1013, Sections 7.8 and 7.9 of NFPA 101, except as otherwise noted in 6.3.5.

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5. Briefly explain your proposed amendment, including the purpose, benefits and problems addressed. Specifically note any impacts or benefits to business, and specify construction types, industries and services that would be

affected. Finally, please note any potential impact on enforcement such as special reporting requirements or additional inspections required.

IBC Table 1004

A code change approval was approved last cycle to reflect requirements for Fixed guideway transit and passenger rail systems but there was a editorial error made when the table was updated.

5.3.11 Means of egress lighting.

This is to correct the reference to IBC 1013 for exit signs and corrects the apparent duplication of a reference to means of egress illumination in two separate provisions of NFPA 130. With this change both IBC 1008 (Means of Egress Illumination) and 1013 (Exit Signs) are referenced.

5.2.4.2 Separation Between Public and Nonpublic Floor Areas.

NFPA 130 does not provide clear language on the nature of the separation such as what hourly rating is required. The IBC addresses this topic clearly in Chapter 5 (e.g., Section 508 and 509) and considers many of the factors outlined in Annex A of NFPA 130. By referring to the IBC plans examiners will be able to apply their IBC experience to light rail stations.

5.2.4.5 Separation Between System and Nonsystem Occupancies.

NFPA 130 does not provide clear language on the nature of the separation. Nonsystem areas of a light rail station include space not associated with transportation such as a coffee shop. This amendment refers to the IBC to determine where fire separations are required. IBC Chapter 5 provisions will apply including section 508 (occupancy separations) and section 508 (incidental uses). This simplifies work required by the designer and the plans examiner.

5.3.8.5 Turnstile-type fare barriers

This amendment refers to the IBC because NFPA 101 is not adopted for light rail stations and the State of Washington uses the IBC for its building code. Referring to the IBC and including a provision to allow security access turnstiles provides clarity for the plans examiner on what code applies.

6.3.3.10 Exit Stairs and Doors

Chapter 6 of NFPA 130 applies to trainways (not stations). This revision clarifies the IBC, rather than NFPA 101, applies to exit doors from trainways which include tunnel cross passage doors, stair doors serving tunnels and elevated guideways, and doors from the emergency walkway (where provided) allowing egress from the trainway through a station, for example.

6.3.5.12 Lighting Systems for Enclosed Trainways

This amendment refers to IBC Chapter 10 rather than NFPA 101 for lighting systems for the means of egress (e.g., emergency walkway) for tunnels. NFPA 101-7.8 addresses Illumination of Means of Egress. NFPA 101-7.9 addresses Emergency Lighting. IBC 1008 addresses Means of Egress Illumination and IBC 1013 addresses Exit Signs. While the NFPA is more detailed code, many of the provisions are mirrored in the IBC which is more concise. Clarifying that designers and plans examiners need only apply the IBC is an improvement. Also, referring to the IBC rather than NFPA 101 is logical because the State of Washington uses the IBC for its building code. We acknowledge NFPA has a higher standard for stairs (10 footcandle) and Sound Transit has adopted the higher criteria as an owner requirement.

6. Specify what criteria this proposal meets. You may select more than one.

- The amendment is needed to address a critical life/safety need.
- The amendment clarifies the intent or application of the code.
- The amendment is needed to address a specific state policy or statute.
- The amendment is needed for consistency with state or federal regulations.
- The amendment is needed to address a unique character of the state.
- The amendment corrects errors and omissions.

7. Is there an economic impact: Yes No

If no, state reason: These amendments do not change what is generally required for fixed transit facilities. They are to help correlate the codes and standards so that designers, plans examiners and building officials can understand and enforce clear rules.

If yes, provide economic impact, costs and benefits as noted below in items a – f.

- a. **Life Cycle Cost.** Use the OFM Life Cycle Cost [Analysis tool](#) to estimate the life cycle cost of the proposal using one or more typical examples. Reference these [Instructions](#); use these [Inputs](#). Webinars on the tool can be found [Here](#) and [Here](#)). If the tool is used, submit a copy of the excel file with your proposal submission. If preferred, you may submit an alternate life cycle cost analysis.

NA

- b. **Construction Cost.** Provide your best estimate of the construction cost (or cost savings) of your code change proposal.

NA

\$Click here to enter text./square foot

(For residential projects, also provide \$Click here to enter text./ dwelling unit)

Show calculations here, and list sources for costs/savings, or attach backup data pages

- c. **Code Enforcement.** List any code enforcement time for additional plan review or inspections that your proposal will require, in hours per permit application:

NA

- d. **Small Business Impact.** Describe economic impacts to small businesses:

NA

- e. **Housing Affordability.** Describe economic impacts on housing affordability:

NA

- f. **Other.** Describe other qualitative cost and benefits to owners, to occupants, to the public, to the environment, and to other stakeholders that have not yet been discussed:

NA

Please send your completed proposal to: sbcc@des.wa.gov

All questions must be answered to be considered complete. Incomplete proposals will not be accepted.