City of Milwaukee Development Center

Worksheet index/project summary

809 N. Broadway/PO Box 324/Milwaukee, WI 53201-0324/414-286-8211

Project address	Plan type(s) – check all that apply
1029 N. Jackson Street, Milwaukee, WI 53202	☐ New construction ☑ Addition ☐ Alteration ☐ HVAC
IBC class of construction Type I-A	**Is chapter 70 review requested?**

Occupancy classification

Floor	SF	Primary	Secondary
Bsmt	0		
1st	9,725	A-3	B
2nd	0		
Upper	0		

Fire alarm/detection/suppression systems	
Manual fire alarm system	
Automatic fire detection	
Automatic fire suppression	
Fire protection standpipes	

Please indicate which worksheets are enclosed with the plans.

- ☐ Grade plane determination worksheet
- ☐ Determination of number of stories above grade worksheet
- ☑ Occupant load worksheet
- ☑ Egress width worksheet
- ☐ Assembly egress width sub-worksheet *(required only for Group A occupancy)*
- ☑ Multiple occupancies worksheet
- ☑ Allowable areas worksheet (2 pages – one story per worksheet)
- ☐ Exterior wall opening worksheet
- ☐ Fire apparatus access and fire lane worksheet
- ☑ Sanitary fixture determination worksheet
- ☐ Control area worksheet
- ☐ Control area table *(required only for Group H occupancy)*
- ☐ Control area sub-worksheet *(required only for Group H occupancy)*
- ☐ Lateral load resisting systems and connections worksheet (6 pages)
- ☐ Structural design worksheet (4 pages)
- ☐ Combustion air sizing worksheet *(required only for HVAC plans)*
- ☐ Outdoor air ventilation worksheet *(required only for HVAC plans)*
- ☑ Accessibility analysis *(required for alterations; may be required for additions)*

All constructions or installations shall be supervised by a Wisconsin registered architect or engineer under Section COMM 61.50, except that a Wisconsin registered HVAC designer may supervise the installation of heating, ventilating and air conditioning systems. The plans, specifications, worksheets and calculations require the signature and stamp of an appropriate professional listed above per Comm 61.31(1). Seal and signature should be affixed at right, unless exempt by Comm 61.30(1).

0902

OCCUPANT LOAD WORKSHEET

1	2	3	4	5	6	7	8	9
ROOM OR SPACE DESIGNATION	CLASSIFICATION OF Table 1003.2.2.2 OCCUPANCY OR USE	Floor Area (square feet)	DENSITY SF/PERSON (specify if net or gross value)	OCCUPANT LOAD BY CALCULATION	OCCUPANT LOAD BY ACTUAL NUMBER	OCCUPANT LOAD BY COMBINATION	ROOM OR SPACE TOTAL	OCCUPANTS ACCOUNTED FOR IN OTHER SPACES
A-3	Assembly	2,661	15	177	177	0	177	no
A-3	Assembly	813	15	54	49	0	49	no
B	Business	5,719	100	58	58	0	58	no

The total occupant load for this worksheet page (or story of the building) = 284 **Occupants**

The total occupant load for this building = 284 **Occupants** *(total of all worksheets/stories)*

Caution: Note that this form is not adequate for use of covered mall total occupant calculations.

EGRESS WIDTH WORKSHEET

ROOM OR SPACE DESIGNATION	OCCUPANCY OR USE CLASSIFICATION	OCCUPANT LOAD FROM WORKSHEET	STAIR WIDTH FACTOR	REQUIRED STAIRWAY WIDTH	OTHER EGRESS COMPONENT FACTOR	OTHER EGRESS COMPONENT WIDTH
LOBBY, BAR/DINING, CLUB RM	A-3	188	0.3	0	0.2	37.6"
PRIVATE BAR/DINING	A-3	49	0.3	0	0.2	9.8"
BUSINESS	B	58	0.3	0	0.2	11.6"
					TOTAL PROVIDED WIDTH	301.5"

Is part of the space shown above an *assembly seating facility*? no If yes, then the Assembly Egress Width Sub-Worksheet should be completed for calculating minimum width requirements.

Ideally the Occupant Load Worksheet should be completed first, before this worksheet, so that the results of that sheet may be simply inserted into the first three columns of this worksheet.

MULTIPLE OCCUPANCIES WORKSHEET

☐ I am using separated uses in my design. (IBC 302.3.3)

☑ I am using non-separated uses in my design. (IBC 302.3.2)

☐ I am using a combination of separated and non-separated uses in my design.

SEPARATED USES

LOCATION (story or side of building)	**OCCUPANCIES SEPARATED** (both classifications)	**FIRE RATING** (hourly rating)
(sample) *east third floor*	*office B and lunch room A-2*	*2 hours*

NON-SEPARATED USES

CONSTRUCTION TYPE I-A

LOCATION (story or side of building)	**OCCUPANCIES NOT SEPARATED** (all classifications)	**MOST RESTRICTIVE**
(sample) *east third floor*	*office B and lunch room A-2*	*A-2*
FIRST FLOOR	BUSINESS & PRIVATE BAR/DINING A-3	A-3
FIRST FLOOR	BUSINESS & LOBBY,CLUB RM,BAR/DINING A-3	A-3

Go to Allowable Areas Worksheets to verify building size allowable for uses shown above.

ALLOWABLE AREAS WORKSHEET

AREA MODIFICATIONS TO TABLE 503

Allowable area = Tabular area + Frontage increase + Sprinkler increase

$A_a = A_t + [(A_t)(I_f)/100] + [(A_t)(I_s)/100] =$ _____

A_a = Allowable area per floor

A_t = Table 503 area per floor

I_f = Area increase due to frontages = (100)[F/P – 0.25](W/30)

I_s = Area increase due to complete sprinkler protection (NFPA 13)

F = Building perimeter which fronts an open space having a minimum width of 20 feet

P = Perimeter of the entire building

W = Minimum width of open space for frontage exposure on any side

Sprinkler increase

I_s = Sprinkler increase for one-story buildings = 300 percent

I_s = Sprinkler increase for multi-story buildings = 200 percent

I_s = Building not completely sprinkler protected = 0 percent

Frontage calculation (note that frontage is only permitted on open space that is a public way or space that is a minimum 20 feet wide which is accessed from a street or fire lane)

	North wall	East wall	South wall	West wall
Building frontage lengths	_____	_____	_____	_____
Minimum width of open space	_____	_____	_____	_____

Minimum width of open space (W) = _____ (least of above ≥ 20 feet)

Total building frontage (F) = _____ (total of above four frontages)

Total building perimeter (P) = _____ (total of four building sides)

Area increase due to frontages I_f = (100)[F/P – 0.25](W/30) = _____

ALLOWABLE AREAS WORKSHEET

(One story per worksheet – add additional worksheets as necessary)

STORY LOCATION	*USE GROUP*	*ACTUAL FLOOR AREA*	*TABLE 503 AREA*	*MODIFIED AREA ALLOWABLE*	*RATIO* *Actual/Allowable*
FIRST	A-3	3,655	UL	N/A	N/A
FIRST	B	5,719	UL	N/A	N/A
				TOTAL OF ALL RATIOS =	

Must be ≤ 1.0

MAXIMUM AREA DETERMINATION OF BUILDING (check only required if > 3 stories)

Total floor area of the building (all stories) = 9,725 *(the actual building total square feet)*

Largest value of allowable area (any story) = UL

Allowable floor area of building (IBC 503.3) = UL *(3 times the maximum modified area)*

Is actual total area less than maximum allowable area? yes

Note that this IBC 503.3 check is still under review for compliance with IBC intent. This BOCA method shown will not meet ICBO interpretation for compliance to IBC 503.3 check.

THE CLASS OF CONSTRUCTION IS TYPE I-A. THE PRIMARY FRAME STRUCTURE REQUIRES A 3-HOUR RATING, BUT THE EXTERIOR WALLS ARE DESIGNED AS NON-LOAD BEARING. THE CLASS OF CONSTRUCTION AND PRIMARY FRAME RATINGS ELIMINATE THE NEED TO RATE THE EXTERIOR WALL AT ALL AND THERE IS NO LIMITATION ON OPENINGS. THIS IS BASED ON THE PROVISIONS OF IBC 2015 ss. 503.1.2 AND 705.3, EXCEPTION #1. THAT EXCEPTION PERMITS TWO BUILDINGS ON THE SAME LOT TO BE EXEMPT FROM IBC 2015 ss. 705.5 AND 705.8 WHEN CONSIDERED AS ONE BUILDING IN ACCORDANCE WITH SECTION 503.1.2. THIS IS POSSIBLE BECAUSE THE ALLOWABLE AREA FOR ALL OCCUPANCY CLASSIFICATIONS (A-3 & B) IS UNLIMITED.

SANITARY FIXTURE DETERMINATION WORKSHEET

Total building design occupancy = 284 (determined from IBC 1003.2.2)

Building occupancy which most closely resembles the use of the space (list each separately)
(Caution: Table 2902.1 uses may be more exact than general use groups of IBC chapter 3)

As in the past, a submitter may document an actual occupancy load, rather than the load determined strictly by square footage, to the building reviewer for consideration of a reasonable number of toilet fixtures. In no case, will the reviewer accept less than 50% capacity or less than the seating indicated on the plans, except possibly via the petition for variance process.

OCCUPANCY		WATER CLOSETS			LAVATORIES		TUB/SHOWER		D F	OTHER
Type	Number People	Factors	Fixtures # Male	Fixtures # Female	Factor	Number Fixtures	Factor	Number Fixtures	Number Fixtures	List the Type SERVICE SINK
A-3	274	1/125 - men 1/65 - female	1.1	2.1	1/200	0.7	N/A	0.0	1.0	1.0
B	10	1/25 for first 50	0.4	0.4	1/40 for first 80	0.3	N/A	0.0	0.0	0.0

Total = 284 (this number should equal building total shown at top on this page)

Round fractions up to a whole number or to one decimal place, if shared facilities are used.

Note that urinals may be substituted for up to 50% of water closets for men per COMM 62.2902(1)(a).

COMPLIANCE CHECK	Men		Women	Lavatories	Bath Tub/ Shower	Drinking Fountain	Other (List) SERVICE SINK
	Urinals	Water Closets	Water Closets				
REQUIRED	0	1.5	2.5	1	0	1	1
PROVIDED	1	1	3	5	0	1	1

ONE SERVICE SINK IS PROVIDED FOR THE ENTIRE BUILDING, NOT EACH OCCUPANCY GROUP.

See IBC 2902.2 & 2902.3 for special exceptions, as well as COMM 62.2902 special restrictions.