

Code Analysis - Color Me Mine	
4 Thompson's Point, West Wing, Portland, ME	
Existing 2 story non-combustible building. Tenant is to fit-out for M (Mercantile) use, creating a facility where customers come to hand paint blank pieces of pre-made pottery. The back room includes two electric kilns for firing and finishing the pottery as well as a storage and office area.	
IBC 2009 Code Review	
Chapter 3 Use and Occupancy Classification	
Section 309.1	Mercantile Group M. Display and sale of merchandise accessible to the public.
Chapter 4 Special Detailed Requirements Based on Use and Occupancy	
Section 417 Drying Rooms	Drying room or kiln installed within a building
Section 417.2	Overhead heating pipes shall have a clearance of not less than 2 inches from combustible contents in the dryer.
Section 417.3	Where the operating temperature of the dryer is 175 deg F or more, metal enclosures shall be insulated from adjacent combustible materials by not less than 12 inches of airspace, or the metal walls shall be lined with 1/2 inch insulating mill board or other approved equivalent insulation.
Section 417.4	Drying rooms designed for high-hazard materials and processes, including special occupancies as provided for in Chapter 3, shall be protected by an approved automatic fire-extinguishing system complying with the provisions of Chapter 9. Building is sprinklered - OK
Chapter 5 General Building Heights and Areas	
Construction Type	III B
Table 503 - Area limitations (M)	12,500 sf/floor
	8,900 sf (whole floor); 1,681 gross sf in work area - OK
Height limitations	2 Story
	Existing 2 stories
Maximum Height	55'
	Existing 29.5' - OK
Section 504.2 - Automatic Sprinkler system increase	If sprinklered, increase 1 story and 20' Existing 2 stories - OK
Table 508.4 - Required Separation	1 hr separation requirement from M Occupancy to A Occupancy (Gymnasium)
Chapter 6 Construction Requirements	
Table 601 Fire Resistance Rating Requirements for Building Elements - Type III B	
Bearing Walls - Exterior	2 hr - GC to confirm whether exterior walls are bearing walls, and confirm 2 hour rating
Bearing Walls - Interior	0 hr
Nonbearing walls/partitions	0 hr
Floor construction & secondary members	0 hr
Primary structural frame	0 hr
Chapter 7 Fire and Smoke Protection Features	
Table 715.4 Fire Door and Fire Shutter Fire Protective Ratings	
Fire walls, 2 hour	1 1/2 Hour rating
Shaft, 1 hour	1 Hour
Exit enclosures, 1 hour	1 Hour
Corridor walls, 1 hour	20 Minute
Chapter 8 Interior Finishes	
Sec 803.1.1 Interior wall and ceiling finish material	
Class A	Flame spread index 0-25; smoke-developed index 0-450
Class B	Flame spread index 26-75; smoke-developed index 0-450
Class C	Flame spread index 76-200; smoke-developed index 0-450
Sec 803.9 Interior Wall and Ceiling Finish Requirements by Occupancy (M)	
Exit enclosures and passageways	Class B
Corridors	Class C
Rooms and enclosed spaces	Class C
Sec 804.4 Interior floor finish requirements	
Interior floor finish	Not less than Class II and comply with DOCFF-1 "pill test"
Chapter 9 Fire Protective Systems (Existing Automatic Sprinkler System)	
Table 903.2.11.6: Section 417.4	
	Drying rooms (kilns) require sprinkler systems if not otherwise required by this code. A sprinkler system is already present - OK
Sec 907.2.7 Group M	Manual fire alarm boxes are not required where the building is equipped with an automatic sprinkler system and the occupant notification appliances will automatically activate upon sprinkler water flow.
Chapter 10 Means of Egress	
Table 1004.1.2 Occupant Load	Total Area = 1642 sf
30sf Gross (Mercantile areas)	1314/30 = 44 Occupants
300sf gross (Accessory Storage + Mechanical spaces)	183/300 = 1 Occupant
100sf gross (Business Area)	145/100 = 2 Occupants
	Total Occupants = 47

Table 1005 Egress Width	
Doors, ramps, and corridors	.2" per person
	9.4" width required, 72" width provided
Sec 1005.2 Door encroachment	Doors and handrails shall not reduce required means of egress by more than 7". Doors in any position shall not reduce the required width by more than one-half.
Sec 1006.2 Illumination Level	Means of egress illumination level shall not be less than 1 foot-candle at the walking surface.
Sec 1006.3 Illumination Emergency Power	Power supply for means of egress illumination shall normally be provided by premises' electrical power. In power failure event, automatic illumination shall include corridors, exit enclosures, exit passageways, interior exit discharge elements for a duration of 90 minutes with battery backup or on-site generator.
Sec 1007.1 Accessible Means of Egress	Accessible spaces must be provided with an accessible means of egress. Exception, accessible means of egress not required in alterations to existing buildings. Existing egress is accessible - OK
Sec 1008 Doors, Gates, and Turnstiles	
Sec 1008.1.1.1 Projections into Clear Width	No projections into required clear width allowed lower than 34" above the floor. Shall not exceed 4" between 34" and 80" above the floor. Exceptions: Door closers and door stops shall be permitted to be 78" min above the floor.
Sec 1008.1.2 Door swing	Door shall swing in the direction of egress travel where serving an occupant load of 50 or more persons. OK
Sec 1008.1.5 Floor Elevation	There shall be a floor or landing on each side of a door and shall be at the same elevation. Exterior may slope .25 / 12 units (2%).
Sec 1008.1.6 Landings at Doors	Landings shall have a width not less than the width of the stairway. When serving an occupant load of 50 or more, doors shall not reduce the landing to less than 1/2 its required width. Landings shall not have a length less than 44" in the direction of travel.
Sec 1008.1.7 Thresholds	Thresholds shall not exceed 1/2"
Sec 1008.1.10 Panic Hardware	Doors serving rooms or spaces with 50 or more occupants shall not be provided with a latch or lock unless its is panic hardware. OK
Sec 1014.3 Common path of egress travel	Occupancy M Not more than 75'
Table 1015.2.1 Two exits	
Separation distance in buildings equipped with a sprinkler system	Shall not be less than one-third the distance of the length of the overall diagonal dimension of the area served.
Table 1016.1 Travel Distance Limitations	
Occupancy M	250' (with sprinkler system)
Sec 1018.2 Corridor Width	44" required, Exception 2: Only 36" required with an occupant capacity of less than 50
Sec 1018.4 Dead End Corridors	
Group M (Sprinklered bldg)	Max 50'
Sec 1027 Exit Discharge	Exits shall discharge directly to the exterior of the building and shall be at grade or direct access to grade.
Sec 1027.3 Exit discharge location	Exterior balconies, stairways, ramps Located at least 10' from lot lines
Chapter 11 Accessibility	
Sec 1105.1 Public entrance	Min 60% entrances Main entrance is an Accessible entrance - OK
Sec 1109.3 Sinks	Where sinks are provided, at least 5% but not less than one provided in accessible spaces shall comply with ICC A117.1.
1109.11.3 Point of Sale and service counters	Where counters are provided for sales or distribution of goods or services, at least one of each type provided shall be accessible.
Chapter 12 Interior Environment	
Sec 1203 Ventilation	1203.5 Contaminants Exhausted Contaminant sources shall be removed in accordance with the IMC and the IFC.
Section 1205 Lighting	
Sec 1205.2 Natural Light	The minimum net glazed area shall not be less than 8 percent of the floor area of the room served.
Sec 1205.3 Artificial Light	Artificial light shall be provided that is adequate to provide an average illumination of 10 foot-candles (107 lux) over the area of the room at a height of 30 inches above the floor.

NFPA 101 Life Safety Code Review	
Chapter 6 Classification of Occupancy and Hazard of Contents	
Sec 6.1.1.0 Mercantile	For requirements, see Chapter 36
Sec 6.1.10.1 Mercantile - Definition	Mercantile Occupancy. An occupancy used for the display and sale of merchandise.
Sec 6.2.2.3 Ordinary Hazard Contents	Ordinary hazard contents shall be classified as those that are likely to burn with moderate rapidity or to give off a considerable volume of smoke.
Table 6.1.14.4.1 Required Separation of Occupancies (Hours)	
Mercantile to Assembly	2 hour
Minimum Fire resistance rating is permitted to be reduced:	By 1 hour due to an automatic sprinkler system (1 hour minimum required)
Chapter 7 Means of Egress	
Sec 7.1.5.1 Means of egress headroom	Not less than 7'-6" with projections not less than 6'-8"
Sec 7.1.5.1.1 Existing building	Not less than 7'-0"
Sec 7.1.10.2	No furnishings, decorations, or other objects shall obstruct exits or their access thereto, egress therefrom, or visibility thereof.
Sec 7.2.1.4.3 Door Leaf Encroachment	During its swing, any door leaf in a means of egress shall not leave less than 1/2 of the required width of a corridor, and shall not project more than 7" into the required width when fully opened.
Table 7.3.1.2 Occupant Load - Mercantile Use/Business Use	
Sales Area on Street Floor (30 sf)	1314/30 = 44 Occupants
Floors only used for offices (100f)	145/100 = 2 Occupants
Storage Use - mercantile (300 sf)	183/300 = 1 Occupant
Total Occupants	47 Occupants
Sec 7.5 Arrangement of Means of Egress	
7.5.1.3.3	In buildings protected throughout by an approved, supervised automatic sprinkler system in accordance with section 9.7, the minimum separation distance between two exits shall not be less than one-third the length of the maximum overall diagonal dimension of the area to be served. Diagonal Dimension = 52'-9" Separation Dist Required = 17'-7" Separation Dist Provided = 37'-6"
Chapter 9 Building Service and Fire Protection Equipment	
Sec 9.1.2 Electrical Systems	Electrical wiring and equipment shall be in accordance with NFPA 70, National Electrical Code.
Sec 9.2.2 Ventilating or Heat-Producing Equipment	Ventilating or heat-producing equipment shall be in accordance with NFPA 91, Standard for Exhaust Systems for Air Conveying of Vapors, Gases, Mists, and Noncombustible Particulate Solids; NFPA 211, Standard for Chimneys, Fireplaces, Vents, and Solid Fuel-Burning Appliances; NFPA 31, Standard for the Installation of Oil-Burning Equipment; NFPA 54, National Fuel Gas Code, or NFPA 70, National Electric Code, as applicable.
Chapter 36 New Mercantile Occupancies	
Sec 36.1.4.2.1 Subclassification of Occupancy	
Class C	All mercantile occupancies of not more than 3000sf gross area and used for sales purposes occupying one story only
Sec 36.1.6 Minimum Construction Requirements (No special requirements)	
Sec 36.2.5 Arrangement of Means of Egress	
36.2.5.3	Common paths of travel shall ... not exceed 100 ft in mercantile occupancies classified as low or ordinary hazard where the building is protected throughout by an approved, supervised automatic sprinkler system in accordance with 9.7.1.1(1).
36.2.5.5	Required aisles shall be not less than 36 in. in clear width
36.2.5.8	Not less than half of the required exits shall be located so as to be reached without passing through checkout stands
36.2.5.9	Checkout stands or associated railings or barriers shall not obstruct exits, required aisles, or approaches thereto
Sec 36.2.6 Travel Distance to Exits	
36.2.6.2	Travel distance shall not exceed 250 ft
Sec 36.3.2 Protection from Hazards	
36.3.2.1.2	When protected by a sprinkler system, storage areas need not be enclosed with a smoke barrier per 8.7.1.2

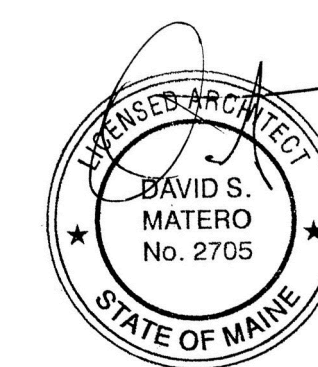
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Revisions

Color Me Mine
Brick North - West Wing
Thompson's Point
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Analysis

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