



City of Ann Arbor

301 E. Huron St.
Ann Arbor, MI 48104
<http://a2gov.legistar.com/Calendar.aspx>

Meeting Agenda Building Board of Appeals

Thursday, September 15, 2022

1:30 PM

Larcom City Hall, 301 E Huron St, Second floor,
City Council Chambers

This meeting will be broadcast live on CTN Cable Channel 16, ATT Channel 99, and
online at 2gov.org/watchCTN

To speak at public comment call Toll Free 877-853-5247 or 888-788-0099 Enter Webinar
ID: 915 6729 3828

CALL TO ORDER

ROLL CALL

APPROVAL OF AGENDA

APPROVAL OF MINUTES

[22-1563](#) Building Board of Appeals Meeting Minutes for July 21, 2022

Attachments: BBA Minutes 7-21-22.pdf

APPEALS, ACTIONS, AND SHOW CAUSE HEARINGS

[22-1564](#) BBA22-2002 - Staff Report for 616 E. Washington, Ann Arbor, MI 48104

Attachments: BBA Staff Report for 616 E Washington.pdf

[22-1565](#) BBA22-2002 - Supporting Materials from Applicant for 616 E. Washington

Attachments: Supporting Materials from Applicant for 616 E Washington.pdf

OLD BUSINESS

NEW BUSINESS

REPORTS AND COMMUNICATIONS

PUBLIC COMMENTARY - GENERAL

ADJOURNMENT

Accommodations, including sign language interpreters, may be arranged by contacting Planning and Development Services by telephone at 1-734-794-6000, x42663 or by written request addressed to Planning Development Services c/o Board of Appeals, 301 East Huron, Ann Arbor, MI 48104. Requests made with less than two business days notice may not be able to be accommodated. Email: ZWaasSmith@a2gov.org



City of Ann Arbor

Meeting Minutes - Draft

Building Board of Appeals

301 E. Huron St.
Ann Arbor, MI 48104
<http://a2gov.legistar.com/Calendar.aspx>

Thursday, July 21, 2022

1:30 PM

Larcom City Hall, 301 E Huron St, Second
floor, City Council Chambers

This meeting will be broadcast live on CTN Cable Channel 16, ATT Channel 99, and
online at 2gov.org/watchCTN

To speak at public comment call Toll Free 877-853-5247 or 888-788-0099 Enter Webinar
ID: 915 6729 3828

CALL TO ORDER

Chair R. Hart called the meeting to order at 1:33 PM

ROLL CALL

Present: 4 - Paul Darling, Robert Hart, David Arnsdorf, and Kevin Cox

Absent: 1 - Hugh A. Flack Jr.

PUBLIC COMMENTARY - GENERAL

None

APPROVAL OF AGENDA

Approved

APPROVAL OF MINUTES

Attachments: BBA Meeting Minutes 6-17-21.pdf

Approved by the Board and forwarded to City Council.

Attachments: BBA Meeting Minutes 6-16-22.pdf

Approved by the Board and forwarded to City Council.

APPEALS, ACTIONS, AND SHOW CAUSE HEARINGS

Attachments: Staff Report BBA22-2002.pdf, Letter to S. Bowers on 5-31-22.pdf, Stream Application for BBA22-2002.pdf

G. Dempsey gave the staff report. Staff recommends a denial as it does not meet the standards for approval and the code has not been misinterpreted. Architect Laura Eder gave a presentation including views of the building as it currently exists and the proposed plans that are being presented to the Board. G. Dempsey discussed the three standards for approval and feels that these standards have not been met. The Board members then asked questions of the applicants, Laura Eder, Scott Bowers and Brad Moore along with City staff, including Fire. Fire Marshall said the issues are occupant load and safe egress. Further discussion followed restroom accessibility. G. Dempsey described the scenario whereby the applicants may need to seek State approval.

R. Hart moves that in the matter of BBA22-2002, Variance Appeal for 616 East Washington, Ann Arbor, Michigan, that the matter be tabled for a period of one month until the next meeting. K. Cox seconds.

Motion passes unanimously.

Attachments: MichTheater-BuildingBoardAppealsLtr.pdf,
MichTheater-BuildingBoardAppealsLtr2.pdf,
MichTheater-BuildingBoardAppealsAddendum.pdf

Attachments: Egress Site Plan during construction.pdf, Egress Site Plan after construction.pdf

OLD BUSINESS

N/A

NEW BUSINESS

N/A

ADJOURNMENT

Meeting adjourned at 2:59 PM

Accommodations, including sign language interpreters, may be arranged by contacting Planning and Development Services by telephone at 1-734-794-6000, x42663 or by written request addressed to Planning Development Services c/o Board of Appeals, 301 East Huron, Ann Arbor, MI 48104. Requests made with less than two business days notice may not be able to be accommodated. Email: ZWaasSmith@a2gov.org

Re: 616 E. Washington St.

Staff Report: Proposed screening room temporary exit arrangements

Petitioner is requesting a variance from the following code sections: 202, table 1006.2.1, 1004.1.2, 1024, 1024.4, 1026, and 1028.

Outline

Introduction

- A. Background: Means of Egress**
- B. Staff Analysis: Stage 3 of construction (6 months duration)**
 - B.1 Occupant load**
 - B.2 Exit passageway & Exit discharge**
 - B.3 Egress through toilet rooms**
- C. Staff Analysis: Stage 4 of construction (1 year + duration)**
- D. Standards for Evaluating Appeals**
- E. Staff Conclusion**

Introduction:

The Screening Room Building, operated by the Michigan Theater, is located on a separate, adjacent lot from the Theater and connected to it. The lot is also the construction site of a new 19 story high-rise building under construction which is designed to wrap around the screening room. Petitioner is requesting modifications to means of egress to allow the continued use and occupancy of the Screening Room Building during the construction of the high-rise. During this approximately 1 ½ year period, petitioner is proposing that alternative exit arrangements be approved incorporating the use of buildings and lots in the immediate area of the screening room.

The request involves several variables including: (a) a phased approach to egress; (b) egress paths through active construction sites; (c) egress paths through two buildings under construction on those sites and (d) occupant load adjustments.

This report is based on information titled “Ann Arbor Building Board of Appeals BBA22-2002.”

A. Background: Means of Egress

Means of egress from any portion of a building is defined as being a “continuous and unobstructed path of vertical and horizontal egress travel from any occupied portion of a building or structure to a public way” (Michigan Building Code 202).

The definition for means of egress further defines it as consisting of three separate and distinct parts. Each of these parts is also defined in MBC 202 and various code sections address each:

1. **Exit access:** Leads to an exit from an occupied space (see 202)
2. **Exit:** A building component between the exit access and the discharge (see 202)
3. **Exit discharge:** Leads from the exit to the public way (see 202)

Petitioner requests approval to provide a single exit from the screening room during Stage 3 of the construction sequence, limiting the occupant load of the room to 49 based upon allowances of Table 1006.2.1 of the Michigan Building Code. In lieu of egress discharge directly to the exterior, the petitioner is asking to use the lobby of the Michigan Theater as well as the toilet rooms of another adjacent building under construction as discharge elements.

Petitioner further requests approval to allow a full occupant load of 257 during the one-year Stage 4 of the construction sequence of the high-rise by using (a) the same Stage 3 egress paths and by also (b) creating a second egress path through both a portion of the high-rise building under construction and a portion of the active construction site.

B. Staff Analysis: Stage 3 of construction.

The proposal for a single exit from the Screening Room building is based on Table 1006.2.1 which allows such a configuration if the space has a maximum occupancy of 49 occupants, and a travel distance of not more than 75 ft. to an exit. The plan indicates that an existing corridor within the screening room building would be converted for use as an exit passageway that would connect the screening room building to two points - one into the lobby of the Michigan Theater and another into the toilet rooms of a second, adjacent building (also under construction), for the exit discharge. This exit passageway would be used as the single exit from the space after being altered to comply with the requirements for exit enclosure fire-resistance ratings and opening protection.

[Please note that the openings into these adjacent buildings have already been the subject of a previous BBA hearing: BBA 21-003].

B.1 Table 1006.2.1 Occupant Load:

The maximum occupant load limit for a single exit assembly occupancy space, is 49 occupants. While the petitioner indicates that the screening room will be limited to 49 occupants the drawing shows over 180 seats and the appeal further indicates a full occupant load of 257 persons, presumably to take into account the lobby standing area immediately adjacent in the building.

The number of fixed seats shown is approximately 180. For areas having fixed seats and aisles, the occupant load is required to be determined by the number of seats installed and at a rate of not more than one person for each 18 inches of seating length (MBC 1004.4). The occupant load for areas in which fixed seating is not installed, such as waiting spaces, is determined in accordance with section 1004.1.2 and added to the number of fixed seats.

While there are code provisions which allow the code official to make decisions about occupant loads and to allow the occupant load used to be less than that determined by calculation (MBC 1004.2) such decisions are more difficult to make at best. There is no clear code language to base

such a decision on, and especially for reducing occupant load where fixed seating is in place. Unless the actual, physical enclosed space people will occupy is reduced, presumed occupant loads are not usually a rational allowance for Building Officials. There is no real way here to support an allowance of 49 occupants with the presence of so many fixed seats and the adjacent waiting area, given the clear language of the code. The intent of the code is to be as objective as possible and to prudently remove subjective decision making that could compromise life safety, given the variables of human behavior.

B.2 Exit Passageway (MBC 1024) & Exit Discharge (MBC 1028) concerns:

Michigan Building Code section 1024 addresses exit passageways and discharge is covered in 1028. Exit passageways are required to terminate at an exit discharge (1024.4). While it may be argued that the exit terminates into an exit discharge, emptying into the lobby of the adjacent Michigan Theater Building, it would not be emptying into any kind of approvable exit discharge. Section 1028.1 (addressing exit discharge) clearly states:

- a. Exits shall discharge directly to the exterior of the building and
- b. Exit discharge shall not re-enter a building (1028.1)

The proposed exit passageway in this case does not exit directly to the exterior of the building and in fact enters two other buildings where the path continues. Configured as they are, they are not any form of acceptable exit discharge as there is no exterior to discharge to.

The exit passageway opens into rooms of two adjacent buildings, each on a separate lot from that of the Screening Room. The code text assumes, however, direct access to the exterior which must then lead directly to the public way. Upon leaving an exit, entering other enclosed space (whether the same building or another) is not permitted. In this case, occupants are no longer in the protected path of the enclosed exit passageway nor are they in exit discharge on the exterior with direct access to the public way.

Please also note that the lobby of the Michigan Theater building would not meet the requirements for an exit passageway given the code requirements of 1024 for enclosure and restricted use (the same would apply to the toilet room building lobby and toilet rooms). In this case, the exit passageway is assumed to be ending at the property line between the buildings. All egress beyond the exit passageway must be evaluated for compliance as exit discharge.

B.3 Egress through toilet rooms

Egress into the toilet rooms is also not considered to be exit discharge. Also note that prior to reaching the actual toilet rooms there is a common toilet room lobby which shares a door to the Michigan Theater lobby. The route will likely cause additional confusion emptying first into a common lobby, and then either of two toilet rooms. The difference between the door into the Michigan Theater building and the door into the toilet room lobby building is estimated to be about 15 ft. and as such there is effectively no difference between entering the Theater and toilet room lobbies. In addition, at the end of both paths occupants are at the same point at the exterior and have still not reached a public way.

C. Staff Analysis: Stage 4 of construction.

Petitioner also proposes a non-compliant means of egress plan for Stage 4 of the construction process. Petitioner seeks approval to allow the Screening Room Building to operate at full capacity for over a year and on an active construction site. The proposal is to create a second egress path in-part within the high-rise construction building and in-part onto the construction site. The total load is stated as 257 people for the screening room. The egress is described as “various egress routes” with little detail.

Construction sites are statistically some of the most dangerous work environments, even for highly trained and skilled workers. Precise control of these sites is difficult and requires constant supervision, even during the dormant hours when no active work may be occurring. There is always a possibility for multiple operations ongoing at any one time, and sites are left each day in an uncompleted state. Hazards may be present in the form of stacks of materials, ladders, lifts and tools, open areas between floors, live electrical components, uncompleted fire protection systems, hazardous material storage and construction waste. No matter how well intentioned, there are lots of situations which may present obstacles or dangers to egress. It is generally not a safe work practice to allow untrained non-construction personnel around the site, whether during or after working hours, especially in an undefined egress path. Sites are also typically locked at night, so that access to the public way could be impeded or impossible.

It is unknown if the MIOSHA Bureau of the State of Michigan would permit such an arrangement even if this appeal is granted, given the number of construction related citations the bureau processes each year.

It is also unknown if the liability insurance policies for the construction companies include provisions for the allowance of the general public on the site, and if so what those provisions might entail.

The pedestrian protection required by the Michigan Building Code in section 3306 is intended for pedestrians adjacent to, but not on a site, as understood by the distance criteria being measured to the lot line - with no internal site distances referenced.. The reason so many streets and sidewalks are closed during a large construction process is directly related to pedestrian safety. Again, it is not assumed the general public will be allowed access to a construction site.

Finally, while there are no differences proposed on the Michigan Theater / Toilet Room side from that of Stage 3, some changes would be needed. During a two exit scenario doors on the eastern wall of the exit passageway and from the toilet room lobby into the exit passageway would need to be reversed. All doors involved in egress during Stage 4 would also need to be equipped with panic hardware (MBC 1010.1.10).

D. Standards for Evaluating Appeals:

An application for appeal shall be based on a claim that:

- a. The true intent of the code or the rules governing construction have been incorrectly interpreted.
- b. The provisions of the code do not apply, or
- c. An equal or better form of construction is proposed (MBC 113.1).

Further, the board shall not have authority to waive requirements of the code (MBC 113.2)

E. Staff Conclusion:

Staff does not support any portion of this request. Staff believes the code has been correctly interpreted, does apply, and that the proposal is not an equal or better form of construction. There are too many potential hazards inherent in this request to allow staff to be in support, given the lack of compliance to technical provisions of the code and the dangers of conditions on construction sites.

Staff believes the need to safeguard the public outweighs the risks of allowing the egress to be configured as requested. The requirements in the Michigan Building Code for protection of the public have been developed over a long period of time and are designed to counterbalance statistics from various building incidents with the need for safety in a variety of building configurations. They are not designed to mix large, active construction environments with the presence of the general public.

Projects such as the remodeling of stores, restaurants or offices are certainly undertaken in existing, occupied buildings all the time. However, for many of these types of projects the spaces are closed for the duration of the remodeling - the occupants are not present. If the building is large enough, a safe area away from the construction zone is created for displaced occupants. Most such projects include a clear demarcation between the active construction areas and the areas of continued occupancy – occupants do not egress through, under or into the work zone. Most are also within a space of singular responsible control – not two existing buildings, two new buildings under construction and three separate lots. Most significantly, there are usually existing, approved and familiar means of egress and fire protection systems in place within the existing building and those are required to be maintained at all times. Unlike the case of this present request, there are no familiar combinations of passages, doors, rooms and spaces to move through to safely leave a building.

PROPOSED MOTION

APPEAL GRANTED

That in Case BBA22-2002, the appeal of the Building Official's decision and 616 E. Washington is Granted relief from sections 202, table 1006.2.1, 1004.1.2, 1024, 1024.4, 1026, and 1028.1 and the Building Board of Appeals Reverses the Building Official's decision for the reason(s) that:

- (1) The true intent of the 2015 Michigan Building Code and sections 202, table 1006.2.1, 1004.1.2, 1024, 1024.4, 1026, and 1028.1 governing the code allowance for the configuration of exits through the Michigan Theatre has been incorrectly interpreted by the Building Official;
- (2) The provisions of 2015 Michigan Building Code sections 202, table 1006.2.1, 1004.1.2, 1024, 1024.4, and 1028.1 do not apply to the allowance for exit through the Michigan Theatre;
- (3) The applicant has proposed an equal or better allowance to exit through the Michigan Theatre;

Stipulations – If Applicable

(Chairman to check box(es) following vote)

OR

APPEAL DENIED

That in Case BBA22-2002 the appeal of the Building Official's decision that the exiting proposed at 616 E. Washington is Denied and the Building Board of Appeals Affirms the Building Official's decision for the reason (2) that:

- (1) The true intent of the 2015 Michigan Building Code and sections 202, table 1006.2.1, 1004.1.2, 1024, 1024.4, 1026, and 1028.1 governing the allowance for exiting at 616 E. Washington have been correctly interpreted by the Building Official.
- (2) The provisions of 2015 Michigan Building Code sections 202, table 1006.2.1, 1004.1.2, 1024, 1024.4, 1026, and 1028.1 applies to the exiting at 616 E. Washington:
- (3) The applicant has not proposed an equal or better exiting plan:

Stipulations – If Applicable

(Chairmen to check applicable box(es) following vote)

Yeas:

Nays:

Absent for this Vote:

Date

Paul Darling, Chairperson

Building Board of Appeals

DEFINITIONS

[F] EMERGENCY CONTROL STATION. An *approved* location on the premises where signals from emergency equipment are received and which is staffed by trained personnel.

EMERGENCY ESCAPE AND RESCUE OPENING. An operable window, door or other similar device that provides for a means of escape and access for rescue in the event of an emergency.

[F] EMERGENCY VOICE/ALARM COMMUNICATIONS. Dedicated manual or automatic facilities for originating and distributing voice instructions, as well as alert and evacuation signals pertaining to a fire emergency, to the occupants of a building.

[F] EMERGENCY POWER SYSTEM. A source of automatic electric power of a required capacity and duration to operate required life safety, fire alarm, detection and ventilation systems in the event of a failure of the primary power. Emergency power systems are required for electrical loads where interruption of the primary power could result in loss of human life or serious injuries.

EMPLOYEE WORK AREA. All or any portion of a space used only by employees and only for work. *Corridors*, toilet rooms, kitchenettes and break rooms are not employee work areas.

[BS] ENGINEERED WOOD RIM BOARD. A full-depth structural composite lumber, wood structural panel, structural glued laminated timber or prefabricated wood I-joist member designed to transfer horizontal (shear) and vertical (compression) loads, provide attachment for diaphragm sheathing, siding and exterior deck ledgers, and provide lateral support at the ends of floor or roof joists or rafters.

ENTRANCE, PUBLIC. See "Public entrance."

ENTRANCE, RESTRICTED. See "Restricted entrance."

ENTRANCE, SERVICE. See "Service entrance."

EQUIPMENT PLATFORM. An unoccupied, elevated platform used exclusively for mechanical systems or industrial process equipment, including the associated elevated walkways, stairways, alternating tread devices and ladders necessary to access the platform (see Section 505.3).

ESSENTIAL FACILITIES. Buildings and other structures that are intended to remain operational in the event of extreme environmental loading from *flood*, wind, snow or earthquakes.

[F] EXHAUSTED ENCLOSURE. An appliance or piece of equipment that consists of a top, a back and two sides providing a means of local exhaust for capturing gases, fumes, vapors and mists. Such enclosures include laboratory hoods, exhaust fume hoods and similar appliances and equipment used to locally retain and exhaust the gases, fumes, vapors and mists that could be released. Rooms or areas provided with general *ventilation*, in themselves, are not exhausted enclosures.

[BS] EXISTING STRUCTURE. A structure erected prior to the date of adoption of the appropriate code, or one for which a legal building *permit* has been issued. For application of provisions in *flood hazard areas*, an existing structure is any

building or structure for which the start of construction commenced before the effective date of the community's first flood plain management code, ordinance or standard.

EXIT. That portion of a *means of egress* system between the *exit access* and the *exit discharge* or *public way*. Exit components include exterior exit doors at the *level of exit discharge*, interior exit stairways and ramps, *exit passageways*, exterior exit stairways and ramps and horizontal exits.

EXIT ACCESS. That portion of a *means of egress* system that leads from any occupied portion of a building or structure to an *exit*.

EXIT ACCESS DOORWAY. A door or access point along the path of egress travel from an occupied room, area or space where the path of egress enters an intervening room, *corridor*, *exit access stairway* or *ramp*.

EXIT ACCESS RAMP. A *ramp* within the exit access portion of the means of egress system.

EXIT ACCESS STAIRWAY. A *stairway* with the exit access portion of the means of egress system.

EXIT DISCHARGE. That portion of a *means of egress* system between the termination of an *exit* and a *public way*.

EXIT DISCHARGE, LEVEL OF. The *story* at the point at which an *exit* terminates and an *exit discharge* begins.

EXIT, HORIZONTAL. See "Horizontal exit."

EXIT PASSAGEWAY. An *exit* component that is separated from other interior spaces of a building or structure by fire-resistance-rated construction and opening protectives, and provides for a protected path of egress travel in a horizontal direction to an *exit* or to the *exit discharge*.

EXPANDED VINYL WALL COVERING. Wall covering consisting of a woven textile backing, an expanded vinyl base coat layer and a nonexpanded vinyl skin coat. The expanded base coat layer is a homogeneous vinyl layer that contains a blowing agent. During processing, the blowing agent decomposes, causing this layer to expand by forming closed cells. The total thickness of the wall covering is approximately 0.055 inch to 0.070 inch (1.4 mm to 1.78 mm).

[F] EXPLOSION. An effect produced by the sudden violent expansion of gases, which may be accompanied by a shock wave or disruption, or both, of enclosing materials or structures. An explosion could result from any of the following:

1. Chemical changes such as rapid oxidation, *deflagration* or *detonation*, decomposition of molecules and runaway polymerization (usually *detonations*).
2. Physical changes such as pressure tank ruptures.
3. Atomic changes (nuclear fission or fusion).

[F] EXPLOSIVE. A chemical compound, mixture or device, the primary or common purpose of which is to function by explosion. The term includes, but is not limited to, dynamite, black powder, pellet powder, initiating explosives, detonators, safety fuses, squibs, detonating cord, igniter cord, igniters and display fireworks, 1.3G.

The term "explosive" includes any material determined to be within the scope of USC Title 18: Chapter 40 and also includes any material classified as an explosive other than

Solid masonry. Masonry consisting of solid masonry units laid contiguously with the joints between the units filled with mortar.

Unreinforced (plain) masonry. Masonry in which the tensile resistance of masonry is taken into consideration and the resistance of the reinforcing steel, if present, is neglected.

[BS] MASONRY UNIT. Brick, tile, stone, glass block or concrete block conforming to the requirements specified in Section 2103.

Hollow. A masonry unit whose net cross-sectional area in any plane parallel to the load-bearing surface is less than 75 percent of its gross cross-sectional area measured in the same plane.

Solid. A masonry unit whose net cross-sectional area in every plane parallel to the load-bearing surface is 75 percent or more of its gross cross-sectional area measured in the same plane.

MASTIC FIRE-RESISTANT COATINGS. Liquid mixture applied to a substrate by brush, roller, spray or trowel that provides fire-resistant protection of a substrate when exposed to flame or intense heat.

MEANS OF EGRESS. A continuous and unobstructed path of vertical and horizontal egress travel from any occupied portion of a building or structure to a public way. A means of egress consists of three separate and distinct parts: the exit access, the exit and the exit discharge.

MECHANICAL-ACCESS OPEN PARKING GARAGES. Open parking garages employing parking machines, lifts, elevators or other mechanical devices for vehicles moving from and to street level and in which public occupancy is prohibited above the street level.

MECHANICAL EQUIPMENT SCREEN. A rooftop structure, not covered by a roof, used to aesthetically conceal plumbing, electrical or mechanical equipment from view.

MEDICAL CARE. Care involving medical or surgical procedures, nursing or for psychiatric purposes.

MEMBRANE-COVERED CABLE STRUCTURE. A nonpressurized structure in which a mast and cable system provides support and tension to the membrane weather barrier and the membrane imparts stability to the structure.

MEMBRANE-COVERED FRAME STRUCTURE. A nonpressurized building wherein the structure is composed of a rigid framework to support a tensioned membrane which provides the weather barrier.

MEMBRANE PENETRATION. A breach in one side of a floor-ceiling, roof-ceiling or wall assembly to accommodate an item installed into or passing through the breach.

MEMBRANE-PENETRATION FIRESTOP. A material, device or construction installed to resist for a prescribed time period the passage of flame and heat through openings in a protective membrane in order to accommodate cables, cable trays, conduit, tubing, pipes or similar items.

MEMBRANE-PENETRATION FIRESTOP SYSTEM. An assemblage consisting of a fire-resistance-rated floor-ceiling,

roof-ceiling or wall assembly, one or more penetrating items installed into or passing through the breach in one side of the assembly and the materials or devices, or both, installed to resist the spread of fire into the assembly for a prescribed period of time.

MERCHANDISE PAD. A merchandise pad is an area for display of merchandise surrounded by aisles, permanent fixtures or walls. Merchandise pads contain elements such as nonfixed and moveable fixtures, cases, racks, counters and partitions as indicated in Section 105.2 from which customers browse or shop.

METAL COMPOSITE MATERIAL (MCM). A factory-manufactured panel consisting of metal skins bonded to both faces of a solid plastic core.

METAL COMPOSITE MATERIAL (MCM) SYSTEM. An exterior wall covering fabricated using MCM in a specific assembly including joints, seams, attachments, substrate, framing and other details as appropriate to a particular design.

[BS] METAL ROOF PANEL. An interlocking metal sheet having a minimum installed weather exposure of 3 square feet (0.279 m²) per sheet.

[BS] METAL ROOF SHINGLE. An interlocking metal sheet having an installed weather exposure less than 3 square feet (0.279 m²) per sheet.

MEZZANINE. An intermediate level or levels between the floor and ceiling of any story and in accordance with Section 505.

[BS] MICROPILE. A micropile is a bored, grouted-in-place deep foundation element that develops its load-carrying capacity by means of a bond zone in soil, bedrock or a combination of soil and bedrock.

MINERAL BOARD. A rigid felted thermal insulation board consisting of either felted mineral fiber or cellular beads of expanded aggregate formed into flat rectangular units.

MINERAL FIBER. Insulation composed principally of fibers manufactured from rock, slag or glass, with or without binders.

MINERAL WOOL. Synthetic vitreous fiber insulation made by melting predominately igneous rock or furnace slag, and other inorganic materials, and then physically forming the melt into fibers.

[BS] MODIFIED BITUMEN ROOF COVERING. One or more layers of polymer-modified asphalt sheets. The sheet materials shall be fully adhered or mechanically attached to the substrate or held in place with an approved ballast layer.

[BS] MORTAR. A mixture consisting of cementitious materials, fine aggregates, water, with or without admixtures, that is used to construct unit masonry assemblies.

[BS] MORTAR, SURFACE-BONDING. A mixture to bond concrete masonry units that contains hydraulic cement, glass fiber reinforcement with or without inorganic fillers or organic modifiers and water.

MULTILEVEL ASSEMBLY SEATING. Seating that is arranged in distinct levels where each level is comprised of

MEANS OF EGRESS

1003.7 Elevators, escalators and moving walks. Elevators, escalators and moving walks shall not be used as a component of a required *means of egress* from any other part of the building.

Exception: Elevators used as an accessible *means of egress* in accordance with Section 1009.4.

SECTION 1004 OCCUPANT LOAD

1004.1 Design occupant load. In determining *means of egress* requirements, the number of occupants for whom *means of egress* facilities are provided shall be determined in accordance with this section.

1004.1.1 Cumulative occupant loads. Where the path of egress travel includes intervening rooms, areas or spaces, cumulative *occupant loads* shall be determined in accordance with this section.

1004.1.1.1 Intervening spaces or accessory areas. Where occupants egress from one or more rooms, areas or spaces through others, the design *occupant load* shall be the combined *occupant load* of interconnected accessory or intervening spaces. Design of egress path capacity shall be based on the cumulative portion of *occupant loads* of all rooms, areas or spaces to that point along the path of egress travel.

1004.1.1.2 Adjacent levels for mezzanines. That portion of the *occupant load* of a mezzanine with required egress through a room, area or space on an adjacent level shall be added to the *occupant load* of that room, area or space.

1004.1.1.3 Adjacent stories. Other than for the egress components designed for convergence in accordance with Section 1005.6, the *occupant load* from separate stories shall not be added.

1004.1.2 Areas without fixed seating. The number of occupants shall be computed at the rate of one occupant per unit of area as prescribed in Table 1004.1.2. For areas without *fixed seating*, the occupant load shall be not less than that number determined by dividing the floor area under consideration by the *occupant load* factor assigned to the function of the space as set forth in Table 1004.1.2. Where an intended function is not listed in Table 1004.1.2, the *building official* shall establish a function based on a listed function that most nearly resembles the intended function.

Exception: Where approved by the *building official*, the actual number of occupants for whom each occupied space, floor or building is designed, although less than those determined by calculation, shall be permitted to be used in the determination of the design *occupant load*.

1004.2 Increased occupant load. The *occupant load* permitted in any building, or portion thereof, is permitted to be increased from that number established for the occupancies in Table 1004.1.2, provided that all other requirements of the code are met based on such modified number and the *occupant load* does not exceed one occupant per 7 square feet

TABLE 1004.1.2
MAXIMUM FLOOR AREA ALLOWANCES PER OCCUPANT

FUNCTION OF SPACE	FLOOR AREA IN SQ. FT. PER
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 1004.4
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	100 gross
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
Locker rooms	15 gross
Exercise rooms	50 gross
II-S 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
Mall buildings-covered and open	See Section 402.8.2
Locker rooms	50 gross
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
Accessory storage areas, mechanical equipment room	300 gross
Warehouses	500 gross

For SI: 1 square foot = 0.0929 m².

R 408.30418

2015 MICHIGAN BUILDING CODE

257

MEANS OF EGRESS

vided from any space with an occupant load greater than 1,000.

1006.2.2 Egress based on use. The numbers of *exits* or access to *exits* shall be provided in the uses described in Sections 1006.2.2.1 through 1006.2.2.5.

- **1006.2.2.1 Boiler, incinerator and furnace rooms.** Two *exit access doorways* are required in boiler, incinerator and furnace rooms where the area is over 500 square feet (46 m²) and any fuel-fired equipment exceeds 400,000 British thermal units (Btu) (422 000 KJ) input capacity. Where two *exit access doorways* are required, one is permitted to be a fixed ladder or an *alternating tread device*. *Exit access doorways* shall be separated by a horizontal distance equal to one-half the length of the maximum overall diagonal dimension of the room.
- **1006.2.2.2 Refrigeration machinery rooms.** Machinery rooms larger than 1,000 square feet (93 m²) shall have not less than two *exits* or *exit access doorways*. Where two *exit access doorways* are required, one such doorway is permitted to be served by a fixed ladder or an *alternating tread device*. *Exit access doorways* shall be separated by a horizontal distance equal to one-half the maximum horizontal dimension of the room.

All portions of machinery rooms shall be within 150 feet (45 720 mm) of an *exit* or *exit access doorway*. An

increase in *exit access* travel distance is permitted in accordance with Section 1017.1.

Doors shall swing in the direction of egress travel, regardless of the *occupant load* served. Doors shall be tight fitting and self-closing.

•• **1006.2.2.3 Refrigerated rooms or spaces.** Rooms or spaces having a floor area larger than 1,000 square feet (93 m²), containing a refrigerant evaporator and maintained at a temperature below 68°F (20°C), shall have access to not less than two *exits* or *exit access doorways*.

Exit access travel distance shall be determined as specified in Section 1017.1, but all portions of a refrigerated room or space shall be within 150 feet (45 720 mm) of an *exit* or *exit access doorway* where such rooms are not protected by an approved *automatic sprinkler system*. Egress is allowed through adjoining refrigerated rooms or spaces.

Exception: Where using refrigerants in quantities limited to the amounts based on the volume set forth in the *International Mechanical Code*.

•• **1006.2.2.4 Day care means of egress.** Day care facilities, rooms or spaces where care is provided for more than 10 children that are 2½ years of age or less, shall have access to not less than two *exits* or *exit access doorways*.

TABLE 1006.2.1
SPACES WITH ONE EXIT OR EXIT ACCESS DOORWAY

OCCUPANCY	MAXIMUM OCCUPANT LOAD OF SPACE	MAXIMUM COMMON PATH OF EGRESS TRAVEL DISTANCE (feet)		
		Without Sprinkler System (feet)		With Sprinkler System (feet)
		Occupant Load		
		OL ≤ 30	OL > 30	
A ^a , E, M	49	75	75	75 ^d
B	49	100	75	100 ^a
F	49	75	75	100 ^d
H-1, H-2, H-3	3	NP	NP	25 ^b
H-4, H-5	10	NP	NP	75 ^b
I-1, I-2 ^e , I-4	10	NP	NP	75 ^a
I-3	10	NP	NP	100 ^b
R-1	10	NP	NP	75 ^a
R-2	10	NP	NP	125 ^a
R-3 ^c	10	NP	NP	125 ^a
R-4 ^f	10	75	75	125 ^a
S ^g	29	100	75	100 ^d
U	49	100	75	75 ^c

For SI, 1 foot = 304.8 mm.

NP = Not Permitted.

a. Buildings equipped throughout with an *automatic sprinkler system* in accordance with Section 903.3.1.1 or 903.3.1.2. See Section 903 for occupancies where *automatic sprinkler systems* are permitted in accordance with Section 903.3.1.2.

b. Group H occupancies equipped throughout with an *automatic sprinkler system* in accordance with Section 903.2.5.

c. For a room or space used for assembly purposes having *fixed seating*, see Section 1029.8.

d. For the travel distance limitations in Group I-2, see Section 407.4.

e. The length of *common path* of egress travel distance in a Group R-3 occupancy located in a mixed occupancy building or within a Group R-3 or R-4 *congregate living facility*.

f. The length of *common path* of egress travel distance in a Group S-2 *open parking garage* shall be not more than 100 feet.

MEANS OF EGRESS

are exposed by other parts of the building at an angle of less than 180 degrees (3.14 rad), the building exterior walls within 10 feet (3048 mm) horizontally of a nonrated wall or unprotected opening shall have a fire-resistance rating of not less than 1 hour. Openings within such exterior walls shall be protected by opening protectives having a fire protection rating of not less than $\frac{1}{2}$ hour. This construction shall extend vertically from the ground to a point 10 feet (3048 mm) above the topmost landing of the stairway or ramp, or to the roof line, whichever is lower.

1023.8 Discharge identification. An interior exit stairway and ramp shall not continue below its level of exit discharge unless an approved barrier is provided at the level of exit discharge to prevent persons from unintentionally continuing into levels below. Directional exit signs shall be provided as specified in Section 1013.

1023.9 Stairway identification signs. A sign shall be provided at each floor landing in an interior exit stairway and ramp connecting more than three stories designating the floor level, the terminus of the top and bottom of the interior exit stairway and ramp and the identification of the stairway or ramp. The signage shall also state the story of, and the direction to, the exit discharge and the availability of roof access from the interior exit stairway and ramp for the fire department. The sign shall be located 5 feet (1524 mm) above the floor landing in a position that is readily visible when the doors are in the open and closed positions. In addition to the stairway identification sign, a floor-level sign in visual characters, raised characters and braille complying with ICC A117.1 shall be located at each floor-level landing adjacent to the door leading from the interior exit stairway and ramp into the corridor to identify the floor level.

1023.9.1 Signage requirements. Stairway identification signs shall comply with all of the following requirements:

1. The signs shall be a minimum size of 18 inches (457 mm) by 12 inches (305 mm).
2. The letters designating the identification of the interior exit stairway and ramp shall be not less than $1\frac{1}{2}$ inches (38 mm) in height.
3. The number designating the floor level shall be not less than 5 inches (127 mm) in height and located in the center of the sign.
4. Other lettering and numbers shall be not less than 1 inch (25 mm) in height.
5. Characters and their background shall have a non-glare finish. Characters shall contrast with their background, with either light characters on a dark background or dark characters on a light background.
6. Where signs required by Section 1023.9 are installed in the interior exit stairways and ramps of buildings subject to Section 1025, the signs shall be made of the same materials as required by Section 1025.4.

1023.10 Elevator lobby identification signs. At landings in interior exit stairways where two or more doors lead to the floor level, any door with direct access to an enclosed eleva-

tor lobby shall be identified by signage located on the door or directly adjacent to the door stating "Elevator Lobby." Signage shall be in accordance with Section 1023.9.1, Items 4, 5 and 6.

1023.11 Smokeproof enclosures. In buildings required to comply with section 403 or 405 of the code, each of the exits of a building that serves stories where the floor surface is located more than 55 feet (16 764 mm) above the lowest level of fire department vehicle access or more than 30 feet (9144 mm) below the level of exit discharge serving such floor levels shall be a smokeproof enclosure or pressurized stairway in accordance with section 909.20 of the code.

R 408.30447

1023.11.1 Termination and extension. A smokeproof enclosure shall terminate at an exit discharge or a public way. The smokeproof enclosure shall be permitted to be extended by an exit passageway in accordance with Section 1023.3. The exit passageway shall be without openings other than the fire door assembly required by Section 1023.3.1 and those necessary for egress from the exit passageway. The exit passageway shall be separated from the remainder of the building by 2-hour fire barriers constructed in accordance with Section 707 or horizontal assemblies constructed in accordance with Section 711, or both.

Exceptions:

1. Openings in the exit passageway serving a smokeproof enclosure are permitted where the exit passageway is protected and pressurized in the same manner as the smokeproof enclosure, and openings are protected as required for access from other floors.
2. The fire barrier separating the smokeproof enclosure from the exit passageway is not required, provided the exit passageway is protected and pressurized in the same manner as the smokeproof enclosure.
3. A smokeproof enclosure shall be permitted to egress through areas on the level of exit discharge or vestibules as permitted by Section 1028.

1023.11.2 Enclosure access. Access to the stairway or ramp within a smokeproof enclosure shall be by way of a vestibule or an open exterior balcony.

Exception: Access is not required by way of a vestibule or exterior balcony for stairways and ramps using the pressurization alternative complying with Section 909.20.5.

SECTION 1024 EXIT PASSAGEWAYS

1024.1 Exit passageways. Exit passageways serving as an exit component in a means of egress system shall comply with the requirements of this section. An exit passageway shall not be used for any purpose other than as a means of egress and a circulation path.

MEANS OF EGRESS

1024.2 Width. The required capacity of *exit passageways* shall be determined as specified in Section 1005.1 but the minimum width shall be not less than 44 inches (1118 mm), except that *exit passageways* serving an occupant load of less than 50 shall be not less than 36 inches (914 mm) in width. The minimum width or required capacity of *exit passageways* shall be unobstructed.

Exception: Encroachments complying with Section 1005.7.

1024.3 Construction. *Exit passageway* enclosures shall have walls, floors and ceilings of not less than a 1-hour fire-resistance rating, and not less than that required for any connecting interior *exit stairway* or ramp. *Exit passageways* shall be constructed as fire barriers in accordance with Section 707 or horizontal assemblies constructed in accordance with Section 711, or both.

1024.4 Termination. *Exit passageways* on the level of *exit discharge* shall terminate at an *exit discharge*. *Exit passageways* on other levels shall terminate at an *exit*.

1024.5 Openings. *Exit passageway* opening protectives shall be in accordance with the requirements of Section 716.

Except as permitted in Section 402.8.7, openings in *exit passageways* other than unprotected exterior openings shall be limited to those necessary for *exit access* to the *exit passageway* from normally occupied spaces and for egress from the *exit passageway*.

Where an interior *exit stairway* or ramp is extended to an *exit discharge* or a public way by an *exit passageway*, the *exit passageway* shall comply with Section 1023.3.1.

Elevators shall not open into an *exit passageway*.

1024.6 Penetrations. Penetrations into or through an *exit passageway* are prohibited except for equipment and ductwork necessary for independent pressurization, sprinkler piping, standpipes, electrical raceway for fire department communication and electrical raceway serving the *exit passageway* and terminating at a steel box not exceeding 16 square inches (0.010 m²). Such penetrations shall be protected in accordance with Section 714. There shall not be penetrations or communicating openings, whether protected or not, between adjacent *exit passageways*.

Exception: Membrane penetrations shall be permitted on the outside of the *exit passageway*. Such penetrations shall be protected in accordance with Section 714.3.2.

1024.7 Ventilation. Equipment and ductwork for *exit passageway* ventilation as permitted by Section 1024.6 shall comply with one of the following:

1. The equipment and ductwork shall be located exterior to the building and shall be directly connected to the *exit passageway* by ductwork enclosed in construction as required for shafts.
2. Where the equipment and ductwork is located within the *exit passageway*, the intake air shall be taken directly from the outdoors and the exhaust air shall be discharged directly to the outdoors, or the air shall be

conveyed through ducts enclosed in construction as required for shafts.

3. Where located within the building, the equipment and ductwork shall be separated from the remainder of the building, including other mechanical equipment, with construction as required for shafts.

In each case, openings into the fire-resistance-rated construction shall be limited to those needed for maintenance and operation and shall be protected by opening protectives in accordance with Section 716 for shaft enclosures.

Exit passageway ventilation systems shall be independent of other building ventilation systems.

SECTION 1025

LUMINOUS EGRESS PATH MARKINGS

1025.1 General. Approved luminous egress path markings delineating the exit path shall be provided in buildings with an occupied floor located more than 75 feet (16 764 mm) above the lowest level of fire department vehicle access of groups A, B, E, I, M, and R-I occupancies in accordance with sections 1024.1 to 1024.5.

R 408.30421

1025.2 Markings within exit components. Egress path markings shall be provided in interior *exit stairways*, interior *exit ramps* and *exit passageways*, in accordance with Sections 1025.2.1 through 1025.2.6.

1025.2.1 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 not more than 1/2 inch (12.7 mm) from the leading edge of the step and the stripe shall not overlap the leading edge of the step by not more than 1/5 inch (12.7 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.

1025.2.2 Landings. The leading edge of landings shall be marked with a stripe consistent with the dimensional requirements for steps.

1025.2.3 Handrails. *Handrails* and handrail extensions shall be marked with a solid and continuous stripe having a minimum width of 1 inch (25 mm). The stripe shall be placed on the top surface of the *handrail* for the entire length of the *handrail*, including extensions and newel post caps. Where *handrails* or handrail extensions bend or turn corners, the stripe shall not have a gap of more than 4 inches (102 mm).

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

MEANS OF EGRESS

1027.6 Exterior exit stairway and ramp protection. *Exterior exit stairways and ramps* shall be separated from the interior of the building as required in Section 1023.2. Openings shall be limited to those necessary for egress from normally occupied spaces. Where a vertical plane projecting from the edge of an *exterior exit stairway or ramp* and landings is exposed by other parts of the building at an angle of less than 180 degrees (3.14 rad), the exterior wall shall be rated in accordance with Section 1023.7.

Exceptions:

1. Separation from the interior of the building is not required for occupancies, other than those in Group R-1 or R-2, in buildings that are not more than two stories above *grade plane* where a *level of exit discharge* serving such occupancies is the first story above *grade plane*.
2. Separation from the interior of the building is not required where the *exterior exit stairway or ramp* is served by an *exterior exit ramp* or balcony that connects two remote *exterior exit stairways* or other *approved exits* with a perimeter that is not less than 50 percent open. To be considered open, the opening shall be not less than 50 percent of the height of the enclosing wall, with the top of the openings not less than 7 feet (2134 mm) above the top of the balcony.
3. Separation from the open-ended *corridor* of the building is not required for *exterior exit stairways or ramps*, provided that Items 3.1 through 3.5 are met:
 - 3.1. The building, including open-ended *corridors*, and *stairways and ramps*, shall be equipped throughout with an *automatic sprinkler system* in accordance with Section 903.3.1.1 or 903.3.1.2.
 - 3.2. The open-ended *corridors* comply with Section 1020.
 - 3.3. The open-ended *corridors* are connected on each end to an *exterior exit stairway or ramp* complying with Section 1027.
 - 3.4. The *exterior walls* and openings adjacent to the *exterior exit stairway or ramp* comply with Section 1023.7.
 - 3.5. At any location in an open-ended *corridor* where a change of direction exceeding 45 degrees (0.79 rad) occurs, a clear opening of not less than 35 square feet (3.3 m²) or an *exterior stairway or ramp* shall be provided. Where clear openings are provided, they shall be located so as to minimize the accumulation of smoke or toxic gases.

SECTION 1028 EXIT DISCHARGE

1028.1 General. *Exits* shall discharge directly to the exterior of the building. The *exit discharge* shall be at grade or shall provide a direct path of egress travel to grade. The *exit discharge* shall not reenter a building. The combined use of

Exceptions 1 and 2 shall not exceed 50 percent of the number and minimum width or required capacity of the required exits.

Exceptions:

1. Not more than 50 percent of the number and minimum width or required capacity of *interior exit stairways and ramps* is permitted to egress through areas on the level of discharge provided all of the following conditions are met:
 - 1.1. Discharge of *interior exit stairways and ramps* shall be provided with a free and unobstructed path of travel to an *exterior exit door* and such *exit* is readily visible and identifiable from the point of termination of the enclosure.
 - 1.2. The entire area of the *level of exit discharge* is separated from areas below by construction conforming to the *fire-resistance rating* for the enclosure.
 - 1.3. The egress path from the *interior exit stairway and ramp* on the *level of exit discharge* is protected throughout by an *approved automatic sprinkler system*. Portions of the *level of exit discharge* with access to the egress path shall be either equipped throughout with an *automatic sprinkler system* installed in accordance with Section 903.3.1.1 or 903.3.1.2, or separated from the egress path in accordance with the requirements for the enclosure of *interior exit stairways or ramps*.
 - 1.4. Where a required *interior exit stairway or ramp* and an *exit access stairway or ramp* serve the same floor level and terminate at the same *level of exit discharge*, the termination of the *exit access stairway or ramp* and the *exit discharge door* of the *interior exit stairway or ramp* shall be separated by a distance of not less than 30 feet (9144 mm) or not less than one-fourth the length of the maximum overall diagonal dimension of the building, whichever is less. The distance shall be measured in a straight line between the *exit discharge door* from the *interior exit stairway or ramp* and the last tread of the *exit access stairway* or termination of slope of the *exit access ramp*.
2. Not more than 50 percent of the number and minimum width or required capacity of the *interior exit stairways and ramps* is permitted to egress through a vestibule provided all of the following conditions are met:
 - 2.1. The entire area of the vestibule is separated from areas below by construction conforming to the *fire-resistance rating* of the *interior exit stairway or ramp enclosure*.

MEANS OF EGRESS

2.2. The depth from the exterior of the building is not greater than 10 feet (3048 mm) and the length is not greater than 30 feet (9144 mm).

2.3. The area is separated from the remainder of the level of exit discharge by a fire partition constructed in accordance with Section 708.

Exception: The maximum transmitted temperature rise is not required.

2.4. The area is used only for means of egress and exits directly to the outside.

1. Horizontal exits complying with Section 1026 shall not be required to discharge directly to the exterior of the building.

1028.2 Exit discharge width or capacity. The minimum width or required capacity of the exit discharge shall be not less than the minimum width or required capacity of the exits being served.

1028.3 Exit discharge components. Exit discharge components shall be sufficiently open to the exterior so as to minimize the accumulation of smoke and toxic gases.

1028.4 Egress courts. Egress courts serving as a portion of the exit discharge in the means of egress system shall comply with the requirements of Sections 1028.4.1 and 1028.4.2.

1028.4.1 Width or capacity. The required capacity of egress courts shall be determined as specified in Section 1005.1, but the minimum width shall be not less than 44 inches (1118 mm), except as specified herein. Egress courts serving Group R-3 and U occupancies shall be not less than 36 inches (914 mm) in width. The required capacity and width of egress courts shall be unobstructed to a height of 7 feet (2134 mm).

Exception: Encroachments complying with Section 1005.7.

Where an egress court exceeds the minimum required width and the width of such egress court is then reduced along the path of exit travel, the reduction in width shall be gradual. The transition in width shall be affected by a guard not less than 36 inches (914 mm) in height and shall not create an angle of more than 30 degrees (0.52 rad) with respect to the axis of the egress court along the path of egress travel. The width of the egress court shall not be less than the required capacity.

1028.4.2 Construction and openings. Where an egress court serving a building or portion thereof is less than 10 feet (3048 mm) in width, the egress court walls shall have not less than 1-hour fire-resistance-rated construction for a distance of 10 feet (3048 mm) above the floor of the egress court. Openings within such walls shall be protected by opening protectives having a fire protection rating of not less than $\frac{1}{4}$ hour.

Exceptions:

1. Egress courts serving an occupant load of less than 10.
2. Egress courts serving Group R-3.

1028.5 Access to a public way. The exit discharge shall provide a direct and unobstructed access to a public way.

Exception: Where access to a public way cannot be provided, a safe dispersal area shall be provided where all of the following are met:

1. The area shall be of a size to accommodate not less than 5 square feet (0.46 m²) for each person.
2. The area shall be located on the same lot not less than 50 feet (15 240 mm) away from the building requiring egress.
3. The area shall be permanently maintained and identified as a safe dispersal area.
4. The area shall be provided with a safe and unobstructed path of travel from the building.

SECTION 1029 ASSEMBLY

1029.1 General. A room or space used for assembly purposes that contains seats, tables, displays, equipment or other material shall comply with this section.

1029.1.1 Bleachers. Bleachers, grandstands and folding and telescopic seating, that are not building elements, shall comply with ICC 300.

1029.1.1.1 Spaces under grandstands and bleachers. Where spaces under grandstands or bleachers are used for purposes other than ticket booths less than 100 square feet (9.29 m²) and toilet rooms, such spaces shall be separated by fire barriers complying with Section 707 and horizontal assemblies complying with Section 711 with not less than 1-hour fire-resistance-rated construction.

1029.2 Assembly main exit. A building, room or space used for assembly purposes that has an occupant load of greater than 300 and is provided with a main exit, that main exit shall be of sufficient capacity to accommodate not less than one-half of the occupant load, but such capacity shall be not less than the total required capacity of all means of egress leading to the exit. Where the building is classified as a Group A occupancy, the main exit shall front on not less than one street or an unoccupied space of not less than 10 feet (3048 mm) in width that adjoins a street or public way. In a building, room or space used for assembly purposes where there is not a well-defined main exit or where multiple main exits are provided, exits shall be permitted to be distributed around the perimeter of the building provided that the total capacity of egress is not less than 100 percent of the required capacity.

1029.3 Assembly other exits. In addition to having access to a main exit, each level in a building used for assembly purposes having an occupant load greater than 300 and provided with a main exit, shall be provided with additional means of egress that shall provide an egress capacity for not less than one-half of the total occupant load served by that level and shall comply with Section 1007.1. In a building used for assembly purposes where there is not a well-defined main exit or where multiple main exits are provided, exits for each level shall be permitted to be distributed around the perimeter

SECTION 113

BOARD OF APPEALS

113.1 Means of appeal. An interested person may appeal a decision of the enforcing agency to the board of appeals in accordance with the act. An application for appeal shall be based on a claim that the true intent of the code or the rules governing construction have been incorrectly interpreted, the provisions of the code do not apply, or an equal or better form

of construction is proposed. The decision of a local board of appeals may be appealed to the construction code commission in accordance with the act and time frames.

Exception: Requests for barrier free design exception shall be in accordance with 1966 PA 1, MCL 125.1352 to 125.1356.

R 408.30414

[A] 113.2 Limitations on authority. An application for appeal shall be based on a claim that the true intent of this code or the rules legally adopted thereunder have been incorrectly interpreted, the provisions of this code do not fully apply or an equally good or better form of construction is proposed. The board shall not have authority to waive requirements of this code.

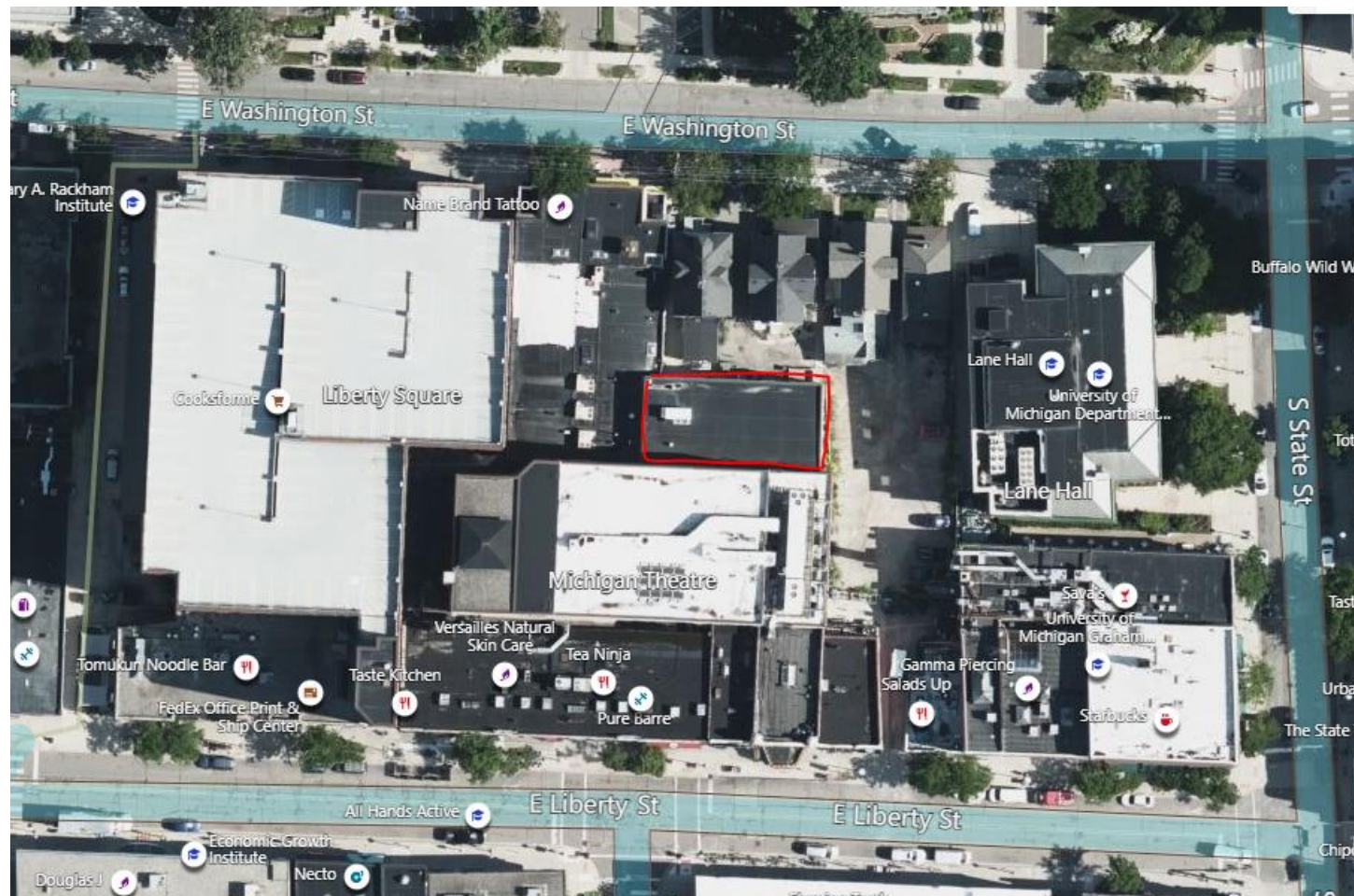
ANN ARBOR
BUILDING BOARD OF APPEALS

BBA22-202

- TEMPORARY EGRESS FROM THE MICHIGAN THEATER SCREENING ROOM ON 616 E WASHINGTON STREET DURING A PORTION OF THE CONSTRUCTION OF THE HIGH RISE.



AERIAL VIEW OF EXISTING CONDITION

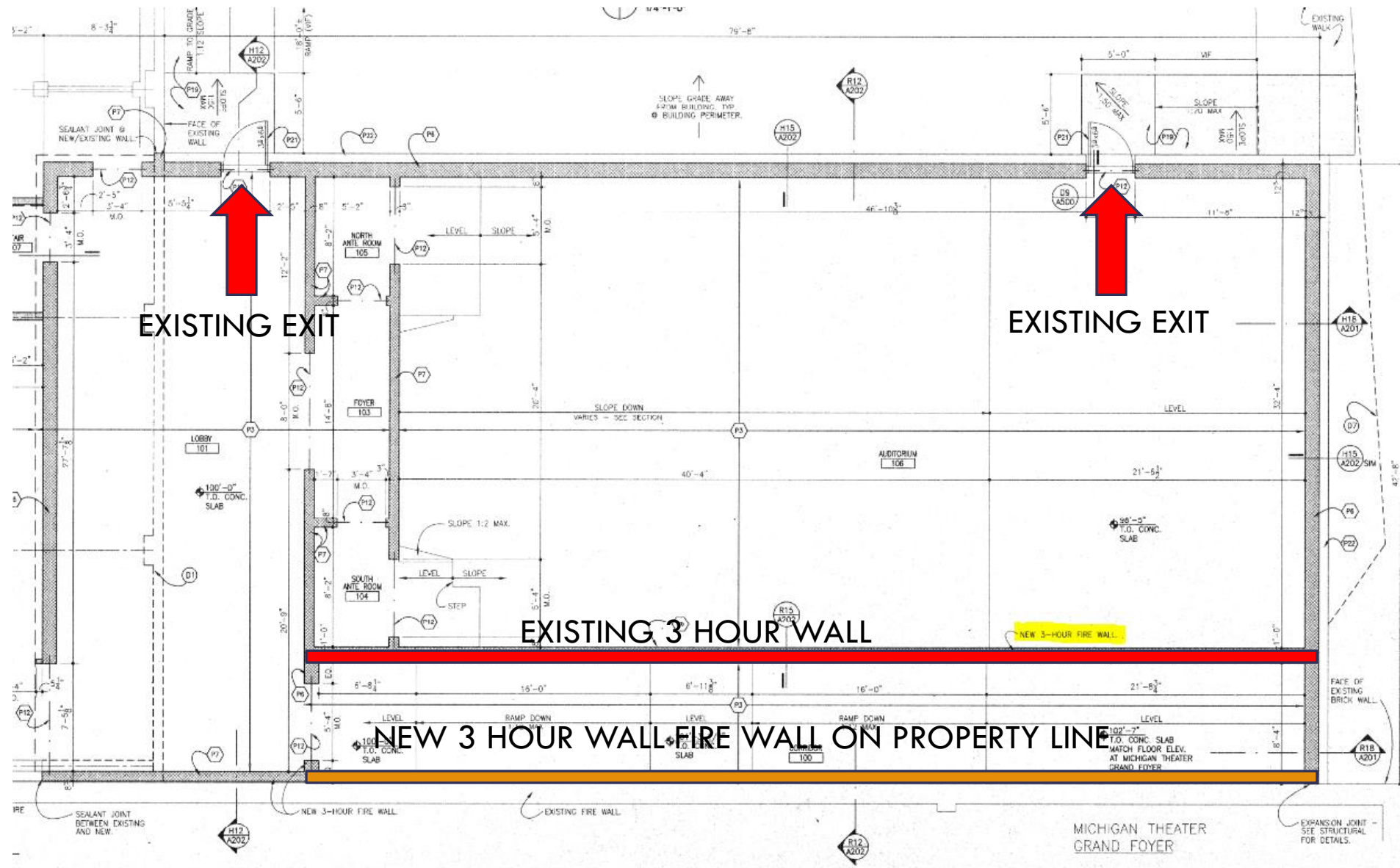


MT Screening Room

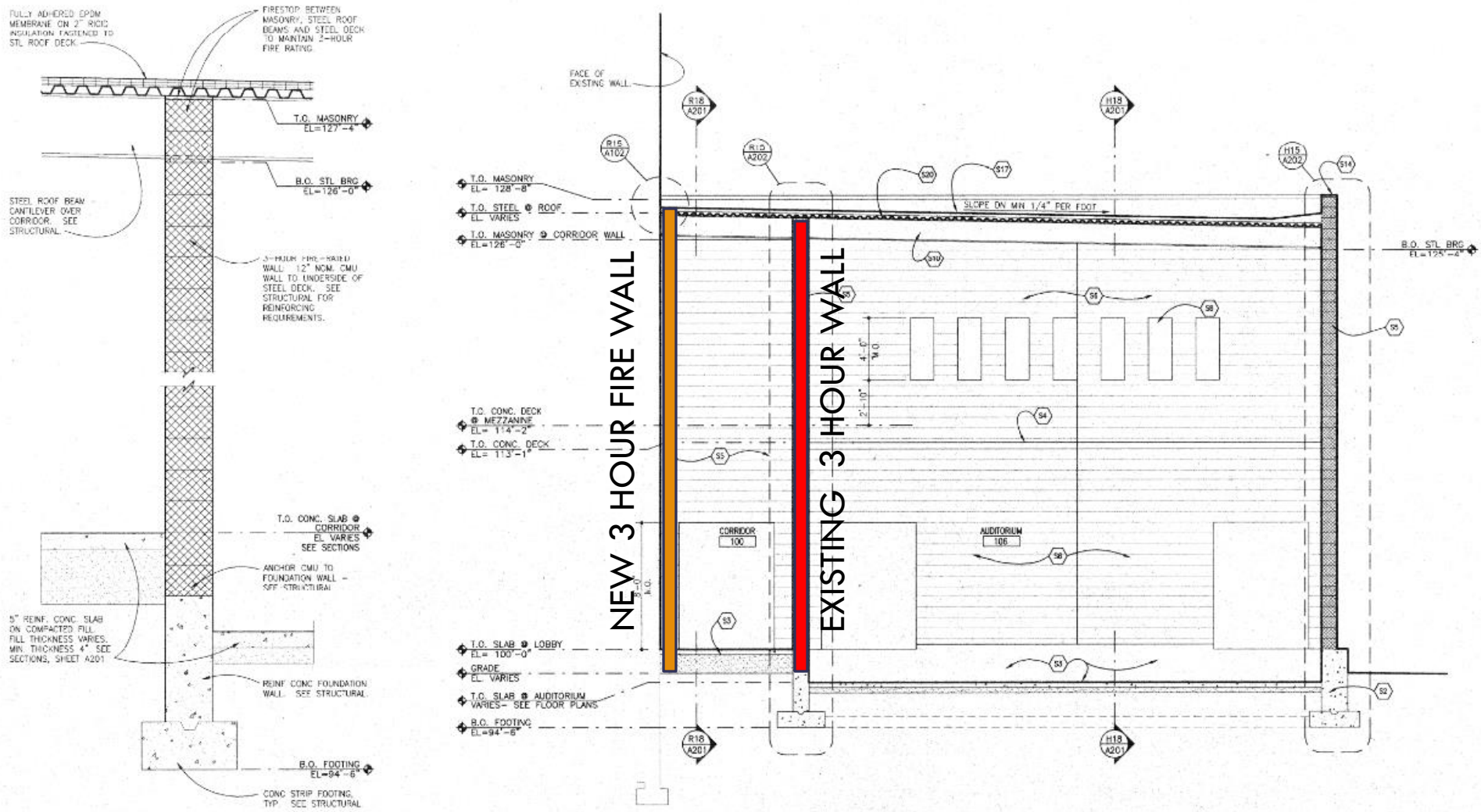
- Type IIIB Construction
- To remain fully sprinklered during construction temp tie into 630 building.
- Now completely on the 616 E Washington property, previously was it's own property mid block. All exits to the public right away were through the buildings to the north.

PLAN OF EXISTING SCREENING ROOM

- Currently exit to the north across the property to the north

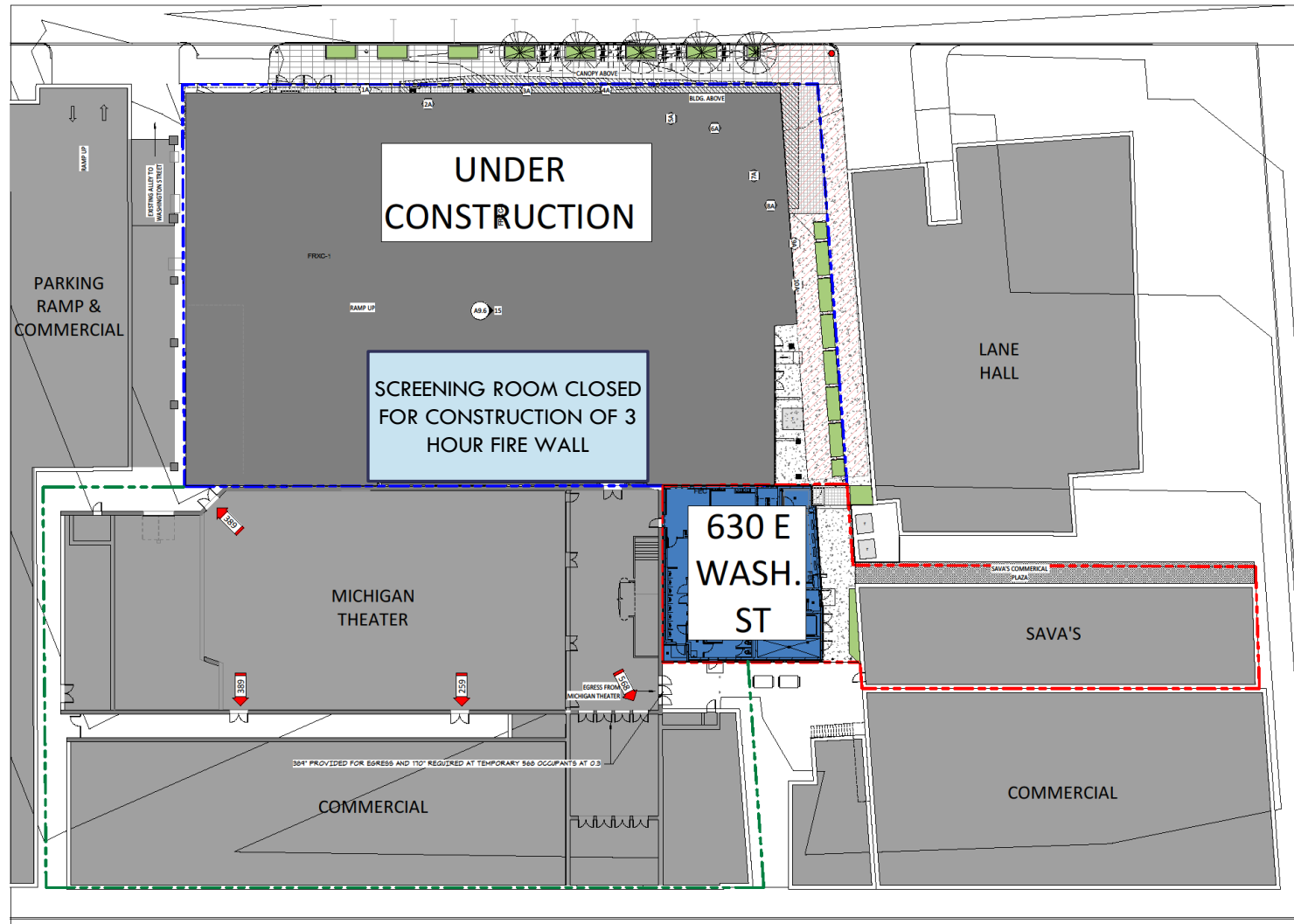


SECTION THROUGH SCREENING ROOM



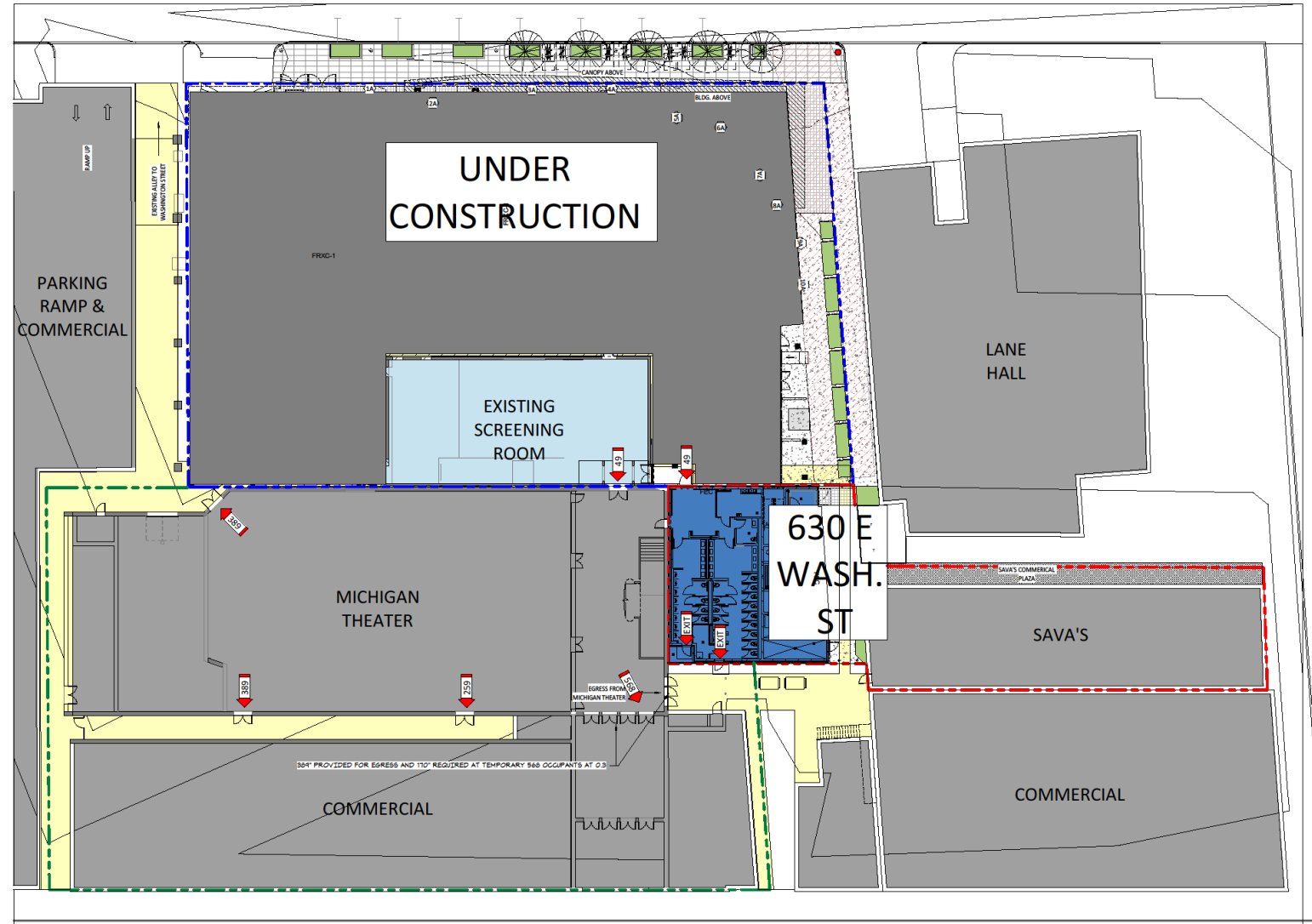
R15	Wall Section at S. Wall	R12	Section North-South Through Auditorium Looking West
-----	-------------------------	-----	---

SCREENING ROOM IS CLOSED DURING CONSTRUCTION OF NEW FIRE WALL (APPROX. 6-8 WEEKS)



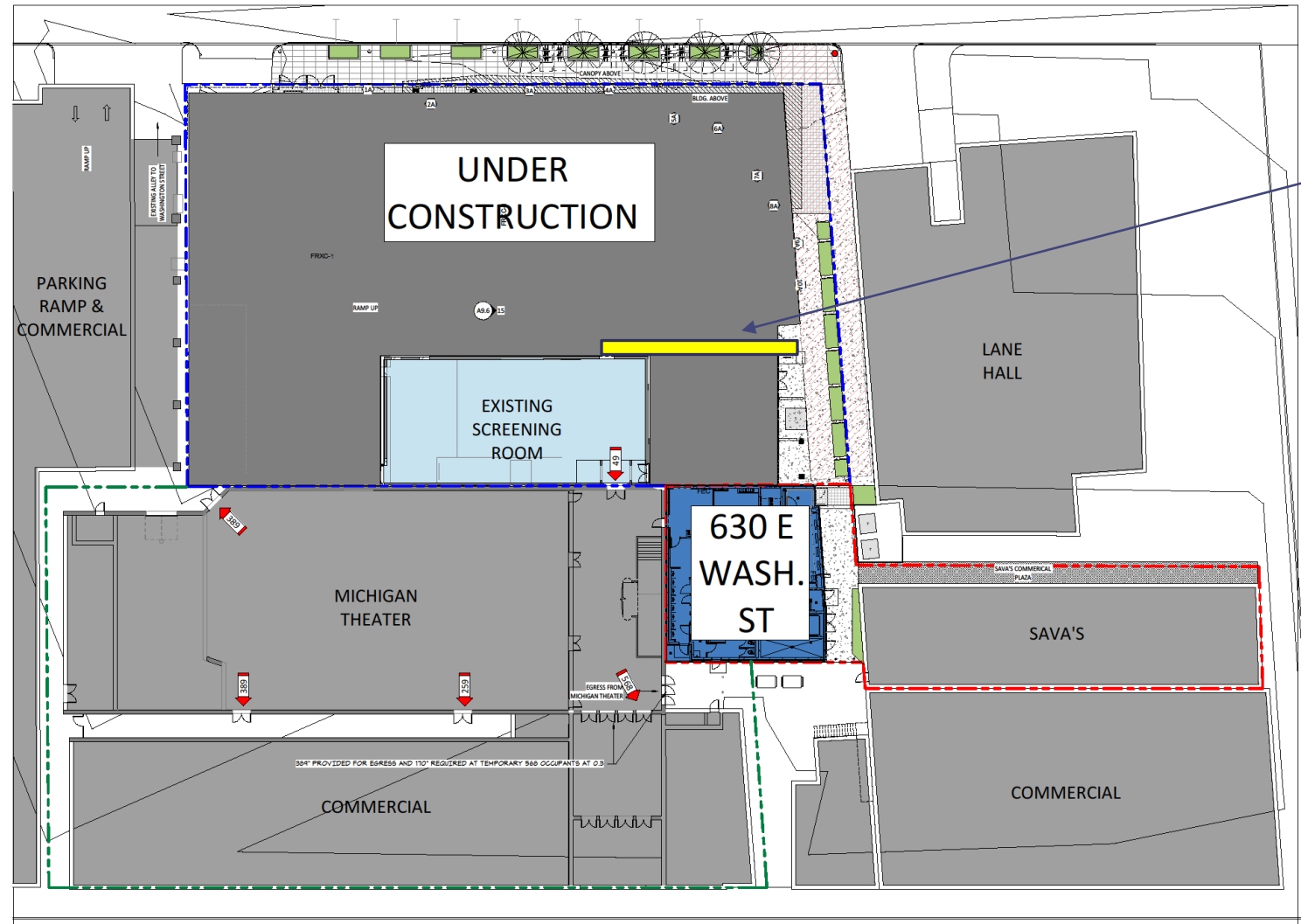
- The screening room will close for approximately 6-8 weeks while the construction of the new 3 hour fire wall is installed. There will be no use of this space from the Michigan Theater.

PROPOSED EXITING DURING TEMP MEANS OF EGRESS (APPROX. 180 DAYS)



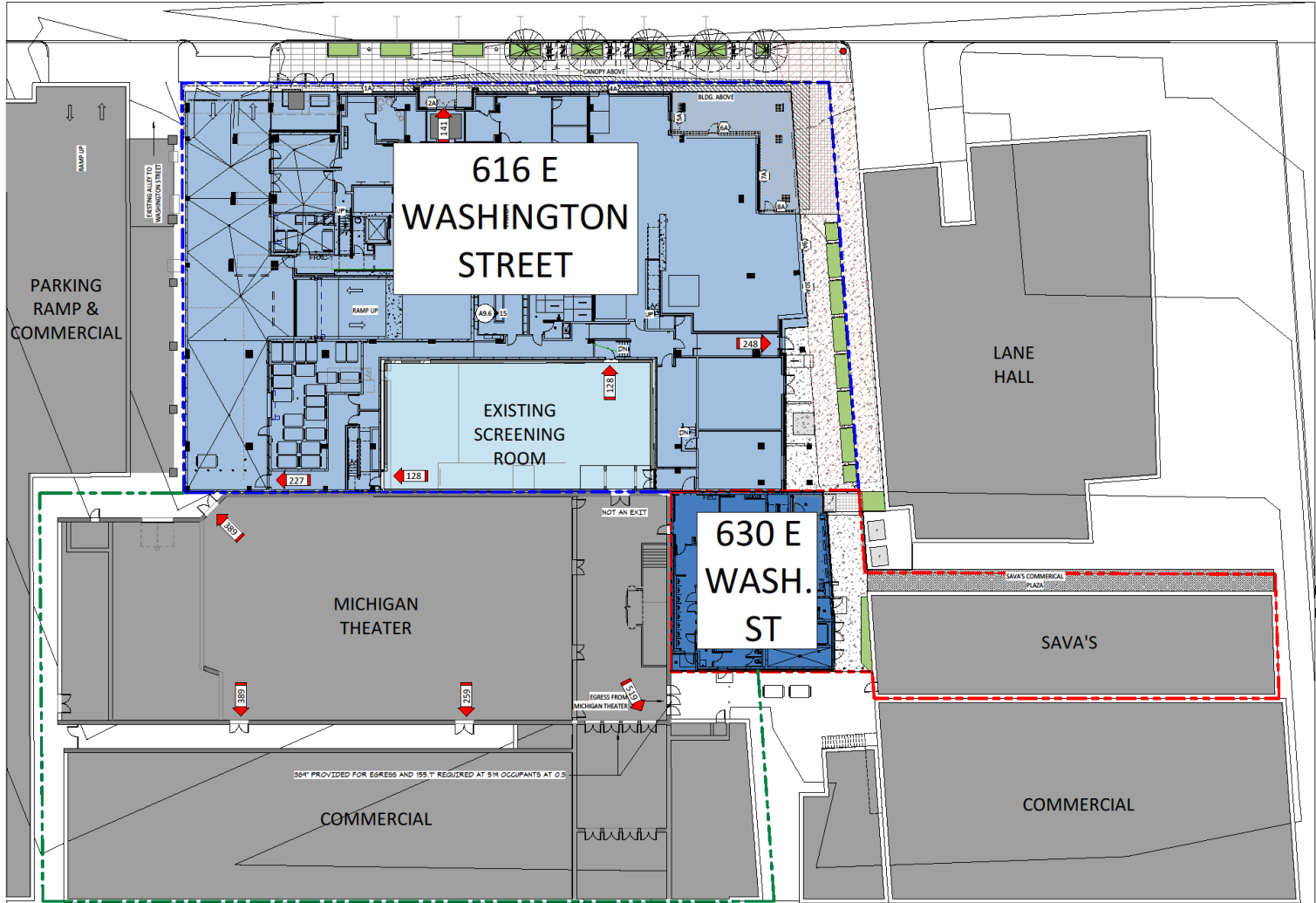
- The screening room will reopen after the 3 hour wall is constructed, a temp hallway connecting the screening room to the restrooms will be constructed on the 616 site and the screening room will be limited to 49 occupants.
- There will be two exits from the corridor, one into the MT and other into the 630 restrooms.

PROPOSED EXITING DURING THE DURATION OF CONSTRUCTION

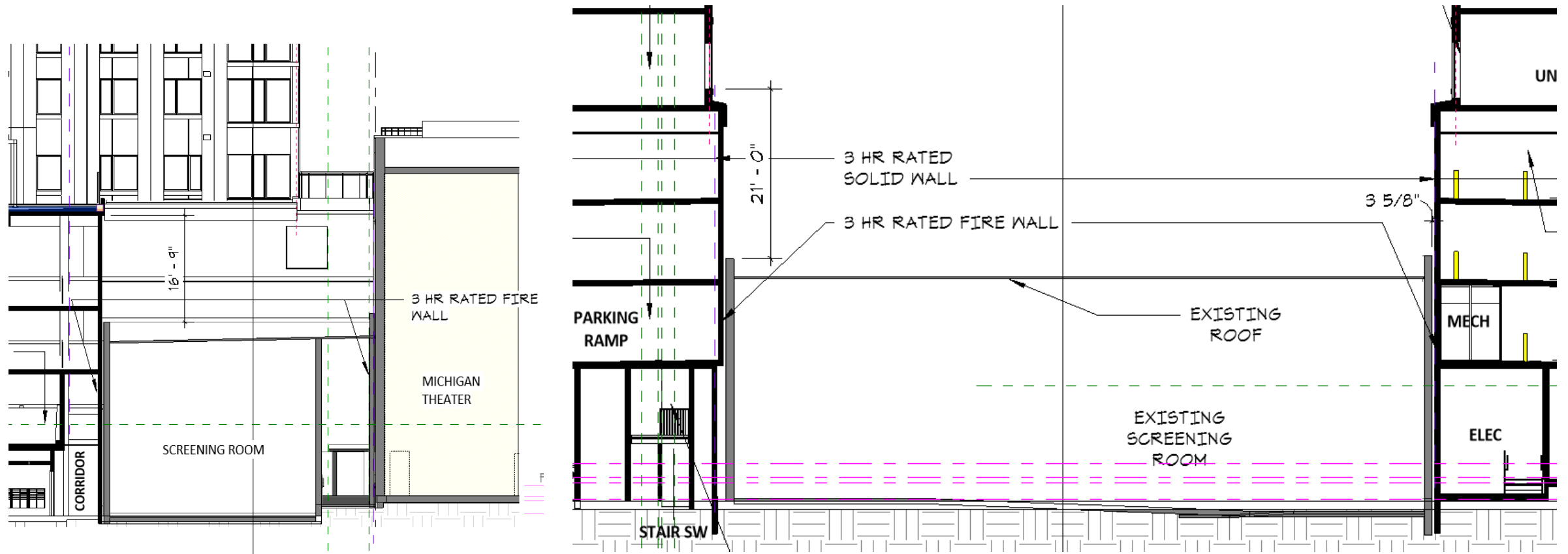


VARIOUS EGRESS ROUTES FROM THE NORTH EGRESS DOOR THROUGH THE CONSTRUCTION SITE WILL BE MAINTAINED PER SECTION 3306 PROTECTION OF PEDESTRIANS, ONCE LEVEL 5 FLOOR SLAB HAS BEEN COMPLETED.

EXITING AFTER CONSTRUCTION IS COMPLETE



NO CONSTRUCTION WILL OCCUR OVER THE SCREENING ROOM



10



CONSULTANT + NAME

PROJECT • INFORMATION

**MICHIGAN THEATER
PROPOSED FIREWALL**

603 EAST LIBERTY STREET
ANN ARBOR, MICHIGAN

PROJECT + NUMBER

18-800

ISSUE + DATE
14 APRIL 2022 REV.

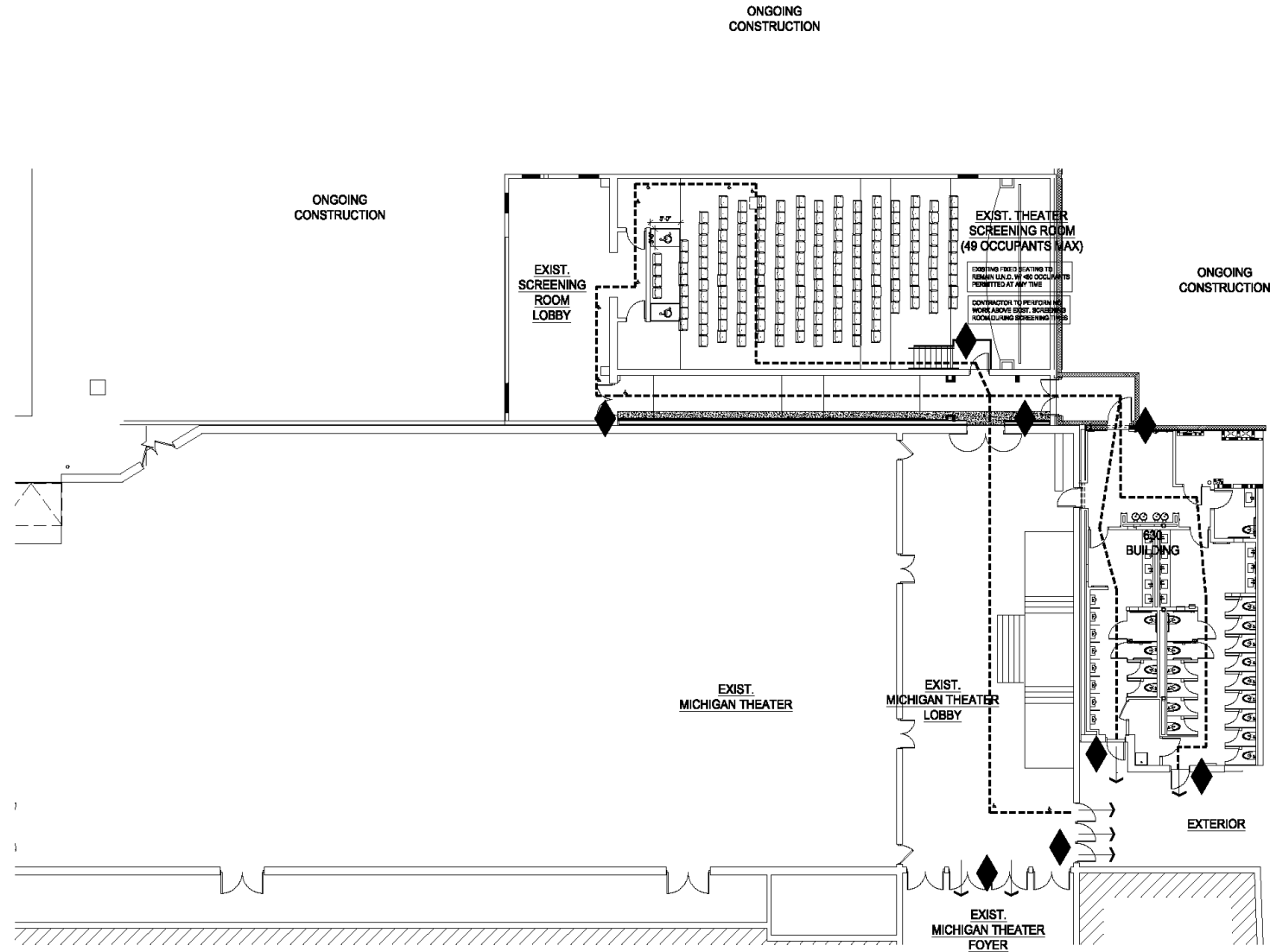


SHEET + TITLE
EGRESS DIAGRAM

SHEET + NUMBER

31

SCREENING ROOM, MICHIGAN THEATER AND 630 RESTROOM PLAN



SCHEDULE OF CONSTRUCTION

CONSTRUCTION DURATION (*TIMELINE SUBJECT TO CHANGE SLIGHTLY AS NO PERMITS HAVE BEEN ISSUED)

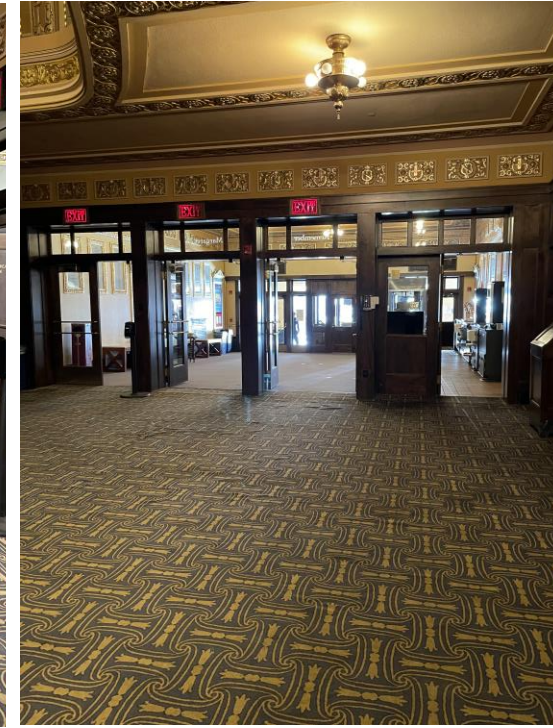
STAGE 1	TWO EXITS ON 616 PROPERTY OUT OF SCREENING ROOM	Current-10/22
STAGE 2	CONSTRUCT NEW 3 HOUR FIRE WALL AT SOUTH FAÇADE OF SCREENING ROOM- SCREENING ROOM CLOSED	10/22-12/22
STAGE 3	LIMIT SCREENING ROOM TO 49 OCCUPANTS- EXIT THROUGH MICHIGAN THEATER AND 630 RESTROOMS	1/23-6/23 (approx.180 days)
STAGE 4	ONE EXIT ON 616 PROPERTY OUT OF SCREENING ROOM AND ONE THROUGH MICHIGAN THEATER/ 630 RESTROOMS	7/23-8/24
STAGE 5	TWO EXITS ON 616 PROPERTY OUT OF SCREENING ROOM PER APPROVED PERMIT PLAN	8/24 Construction Completion

FIRE SUPPRESSION SYSTEM

FIRE SUPPRESSION

FIRE SUPPRESSION IN OPERATION

630



The fire suppression of the Michigan Theater screening room will be disconnected from the Cadillac Building when it is demo'd and while the screening room is closed, work will be done to temporarily connect the fire suppression system to the new 630 Building until the fire suppression system is running in the 616 Building.

OCCUPANT LOAD

MAXIMUM OCCUPANT LOAD

1004.3 Posting of occupant load. Every room or space that is an assembly occupancy shall have the *occupant load* of the room or space posted in a conspicuous place, near the main *exit* or *exit access doorway* from the room or space. Posted signs shall be of an approved legible permanent design and shall be maintained by the owner or the owner's authorized agent.

Total Screening Room Occupancy

257



The screening room has occupancy for egress of 257 in it's current configuration based on the original code plans. This occupancy would not be allowed in the Screening Room until 2 means of egress are in place. This would include an exit to the north through 616.

Limiting occupant load

49

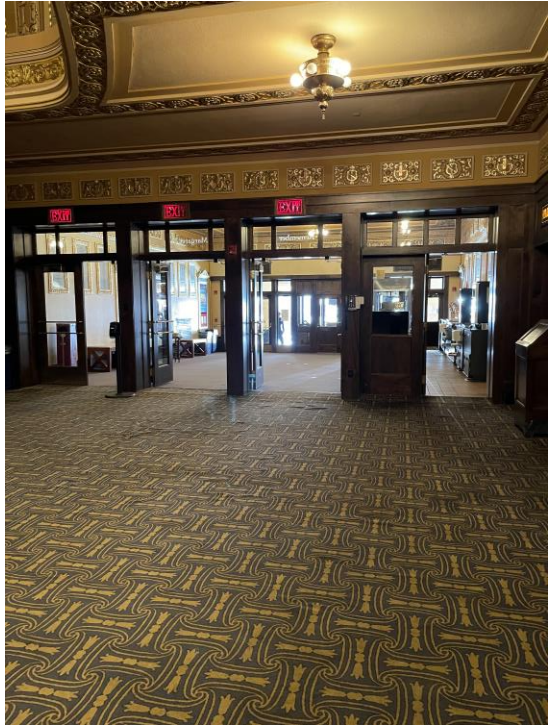
A posted maximum occupancy will be displayed per MBC 1004.3 and the Michigan Theater will track ticket sales as to not allow more than 49 occupants within the screening room building at one time. Staff will be educated and directed to maintain this occupancy. This would be a temporary limit for approximately 180 days.

EXIT TRAVEL DISTANCE

EXIT TRAVEL DISTANCE

TABLE 1017.2
EXIT ACCESS TRAVEL DISTANCE^a

OCCUPANCY	WITHOUT SPRINKLER SYSTEM (feet)	WITH SPRINKLER SYSTEM (feet)
A, E, F-1, M, R, S-1	200	250 ^b
I-1	Not Permitted	250 ^b
B	200	300 ^c
F-2, S-2, U	300	400 ^c



TRAVEL DISTANCE

141'-
211'

The travel distance out of screening room to the exterior doors in the Michigan Theater Lobby and 630 Building is less than 250' of overall travel distance. During that path, an occupants have two routes that are less than 75' before entering a 3 hr rated corridor, passing through a 3 hr rated door and clearly seeing the exit doors within the Lobby of the Michigan Theater. They can also exit through the new 630 Washington Building in a Type IA construction with a fully functioning sprinkler system and 3 hour rated walls and ceiling.

SAFEGUARDS DURING CONSTRUCTION

SAFE GUARDS DURING CONSTRUCTION

CHAPTER 33

SECTION 3310 MEANS OF EGRESS

3310.1 Stairways required. Where a building has been constructed to a *building height* of 50 feet (15 240 mm) or four *stories*, or where an existing building exceeding 50 feet (15 240 mm) in *building height* is altered, no fewer than one temporary lighted *stairway* shall be provided unless one or more of the permanent stairways are erected as the construction progresses.

[F] 3310.2 Maintenance of means of egress. Required *means of egress* shall be maintained at all times during construction, demolition, remodeling or *alterations* and *additions* to any building.

Exception: Existing means of egress need not be maintained where *approved* temporary *means of egress* systems and facilities are provided.



LETTER FROM RUSS COLLINS

SUPPORT FROM THE MICHIGAN THEATER



*Ann Arbor's Historic Center for
Fine Arts & Performing Arts*

July 19, 2022

Building Board of Appeals
BUILDING DEPARTMENT
CITY OF ANN ARBOR
301 East Huron St.
Ann Arbor, MI 48104

Dear Ann Arbor Building Board of Appeals:

Please be advised that The Michigan Theater Foundation is in full support of the request made to the Building Board of Appeals to allow a maximum occupancy limit of 49 occupants for our 'Screening Room' theater for a limited time (with a single exit and an exit discharge greater than 75'). This is necessitated due to constraints imposed by the adjacent construction of the 616 E. Washington Street project.

The Michigan Theater highly respects and values the health and safety of its staff and patrons. The Foundation believes the occupant limit and use of the existing 3-hour exit corridor, coupled with the attention and supervision of our on-site staff, will do what we can to ensure the ability of our patrons to safely reach an exit in the event of an emergency. This is especially true given the limited amount of time being requested for these modifications.

Once construction of the fifth floor of the 616 E. Washington project (poured concrete construction) has been completed, an exterior secondary exit from the Screening Room will be incorporated across that site to Public Rights of Way, allowing for additional exiting from the Screening Room during the completion of construction. The Michigan Theater will then request to run the Screening Room at a greater degree of occupancy, potentially full capacity (currently the capacity is 200). Ultimately, when the 616 E. Washington Street Building is completed, there will be 2 exits for the Michigan Theater's Screening Room which will fully meet modern building codes.

We respectfully ask the Building Board of Appeals to carefully consider and approve the request to temporarily limit the Screening Room total occupancy to 49 occupants with a single exit discharge greater than 75'. The Screening Room is a very important venue for the viability and vitality of the Michigan Theater Foundation, and we believe the proposed exiting strategy codified in the requested variance is sound and safe.

STATETHEATRE

cinetopia
FILM FESTIVAL

ART HOUSE
CONVERGENCE

Tel: (734) 668-8397
Fax: (734) 668-7136

608 East Liberty Street
Ann Arbor, MI 48104
www.michtheater.org

Sincerely,

A handwritten signature in blue ink, appearing to read "Russell B. Collins".

Russell B. Collins, Executive Director