ANN ARBOR BUILDING BOARD OF APPEALS

STAFF REPORT

Meeting Date: April 19, 2018

Type of Request: VARIANCE

Building Board of Appeals Request **BBA18-002** at 3380 Nixon Road, Ann Arbor, MI 48104.

(Parcel Identification Number: **09-09-10-401-001**)

DESCRIPTION AND DISCUSSION

Property Owners Name and Address:

BRE Nixon Road Associates
280 W. Maple Road, Suite 230
Birmingham, MI 48009

BACKGROUND

Mike Parks of Cypress Partners on behalf of BRE Nixon Rd. Associates (Owner) are appealing a code interpretation made by the Building Official for the requirement to provide a 1-hour separation between the exterior balconies (Horizontal and Vertical) of the apartment units at 3380 Nixon Road – per Section 420.2 & 420.3 of the MBC 2012. The Building Official's interpretation is that the exterior balconies are considered part of the "Building Area" and therefore subject to the requirements of Section 420, which is for Groups I-1, R-1, R-2, and R-3. The appeal on the interpretation is to allow the Section 1406.3 of the MBC 2012 to be used for projections and allow unrated balconies.

BUILDING OFFICIAL CODE INTERPRETATION

There are three (3) - 3 story buildings that are NFPA 13 Suppressed, an R-2 Use, and are a VA type of construction. Each balcony is supported from the foundation up three stories to the roof structure and the balconies are within the horizontal projection of the roof or balcony floor above. Each balcony has a wall section that separates the dwellings units from each other. The following four items listed below will help provide the appropriate code path as seen by the Building Official:

1. The code states by definition that "**AREA, BUILDING.** The area included within surrounding exterior walls (or exterior walls and fire walls) exclusive of vent shafts and courts. Areas of the building not provided with surrounding walls shall be included in the building area if such areas are included within the horizontal projection of the roof or floor above." With the horizontal projection of the roof and the floor above the balconies by definition, should be included and be considered part of the building area.

2. Chapter 4 (MBC 2012) - Special Detailed Requirements Based on Use and Occupancy- is in addition to the occupancy and construction requirements in the code and the provisions of this chapter apply to the special uses and occupancies. Section 420 is

required for GROUPS I-1, R-1, R-2, and R-3. The Separation walls and Horizontal separation Sections 420.2 & 420.3 require that dwelling units be separated as required and in accordance with Sections 708 and 711.

3. The code states by definition that "**DWELLING UNIT.** A single unit providing complete, independent living facilities for one or more persons, including permanent provisions for living, sleeping, eating, cooking and sanitation." With this definition the balcony is considered part of the living area of an apartment/dwelling unit.

4. Chapter 1 (MBC 2012) – Scope and Administration provides Section 102 APPLICABILITY. **"(A) 102.1 GENERAL.** Where there is a conflict between a general requirement and a specific requirement, the specific requirement shall be applicable. Where, in any specific case, different sections of this code specify different materials, methods of construction or other requirements, the most restrictive shall govern."

The code path as shown in item # 2 is for SPECIAL DETAILED REQUIREMENTS on USE and OCCUPANCY, this is in addition to the occupancy and construction requirements in the code. Chapter 4 is a more detailed requirement for uses and occupancies. As seen in item # 1 above, this should not be considered a projection off of an exterior wall and building, but the balcony should be considered part of the building. It is also seen as a part of a dwelling unit as shown by definition in item # 3 and thus should meet the requirements of Section 420.

The code section for EXTERIOR WALLS in chapter 14, have requirements for Balconies and similar projections in Section 1406.3. This section has an exception # 3 that states the balconies are not required to have a fire-resistance rating where sprinkler protection is extended to these area. While the balcony may be a projection, because the balconies are stacked and a roof overhead, by definition the balconies become part of the building: and thus should meet the requirements of Section 420.

If there are any thoughts that the balconies are still a projection and may be allowed the exception under Section 1406.3 – exception # 3, but one believes there may be a conflict in the code with Section 420, then I would ask that you review item # 4 above. Section 102.1 under the Scope of Administration states that "Where, in any specific case, different sections of this code specify different materials, methods of construction or other requirements, the most restrictive shall govern." Section 420 would be the more restrictive requirement and then would be required.

You will also find an interpretation from ICC that has been provided by James D. Connell, P.E., which has been provided by the applicant. Mr. Connell has stated that the private balconies accessed through the dwelling units are still an exterior projection and are covered in Section 1406.3 and the exception to the fire resistance rating for the sprinklered

balcony floors is valid whether the balcony is an extension of the dwelling unit or an exit access balcony. He does not believe that Section 420 would apply to balcony floors.

In an attempt to understand further the code opinion from Mr. Connell out of the Birmingham office, I contacted him. He was firm in his thoughts and really did not want to discuss it. I then contacted the ICC Plan Review Department located in the Chicago office. That office decided they wanted to have several people re-review the code opinion. The final result was a difference of opinion among ICC staff. It would have been nice if everyone had the same opinion, but there were different opinions on this code interpretation. As everyone knows the code commentaries and ICC code opinions may assist us in getting a different view of how the code may be looked at and thus help us to come up with a final code determination. So, it will be said that each jurisdiction has final approval and interpretation of the codes (with exception to an appeal with the BBA) as that code official has the responsibility and internal interest to protect their public's safety.

In conclusion, I believe that Chapter 4 Section 420 was put in place to provide a safer structure for the specific uses (Groups I-1, R-1, R-2, R-3) by requiring fire partitions and fire-resistance rating of the horizontal assemblies per Section 708 & 711, which is in addition to the occupancy and construction requirements of the code. I would also note that the balconies through Section 708 & 711 would require supporting construction to be protected (foundation to roof structure) to afford the fire-resistance rating and will make the structure safer.

Please see that attached code sections for reference – Section 102.1, 202, 401.1, 420, 708, 711, 1406, 1406.3,

STANDARDS FOR APPROVAL

PA 230 Section 125.15.15
Specific variance from code: breach of condition; permissible variance.
Sec. 15.

(1) After a public hearing a board of appeals may grant a specific variance to a substantive requirement of the code if the literal application of the substantive requirement would result in an exceptional, practical difficulty to the applicant, and if both of the following requirements are satisfied:
    a. The performance of the particular item or part of the building or structure with respect to which the variance is granted shall be adequate for its intended use and shall not substantially deviate from performance required by the code of that particular item or part for the health, safety and welfare of the people of this state.
    b. The specific condition justifying the variance shall be neither so general nor recurrent in nature as to make an amendment of the code with respect to the condition reasonably practical or desirable.

(2) A board of appeals may attach in writing any condition in connection with the granting of a variance that in its judgement is necessary to protect the health, safety and welfare of the people of this state. The breach of a condition shall automatically invalidate the variance and any permit, license and certificate granted on the basis of it. In no case shall more than a minimum variance from the code be granted than is necessary to alleviate the exceptional, practical difficulty.

CHAPTER 1
SCOPE AND ADMINISTRATION

PART 1—SCOPE AND APPLICATION

SECTION 101
GENERAL

101.1 Title. These rules shall be known as the Michigan building code, hereinafter referred to as "the code."

R 408.30402

[A] 101.2 Scope. The provisions of this code shall apply to the construction, *alteration*, relocation, enlargement, replacement, *repair*, equipment, use and occupancy, location, maintenance, removal and demolition of every building or structure or any appurtenances connected or attached to such buildings or structures.

Exception: Detached one- and two-family *dwellings* and multiple single-family *dwellings* (*townhouses*) not more than three *stories* above *grade plane* in height with a separate *means of egress* and their accessory structures shall comply with the *International Residential Code*.

[A] 101.2.1 Appendices. Provisions in the appendices shall not apply unless specifically adopted.

[A] 101.3 Intent. The purpose of this code is to establish the minimum requirements to safeguard the public health, safety and general welfare through structural strength, *means of egress* facilities, stability, sanitation, adequate light and ventilation, energy conservation, and safety to life and property from fire and other hazards attributed to the built environment and to provide safety to fire fighters and emergency responders during emergency operations.

[A] 101.4 Referenced codes. The other codes listed in Sections 101.4.1 through 101.4.6 and referenced elsewhere in this code shall be considered part of the requirements of this code to the prescribed extent of each such reference.

[A] 101.4.1 Gas. The provisions of the *International Fuel Gas Code* shall apply to the installation of gas piping from the point of delivery, gas appliances and related accessories as covered in this code. These requirements apply to gas piping systems extending from the point of delivery to the inlet connections of appliances and the installation and operation of residential and commercial gas appliances and related accessories.

[A] 101.4.2 Mechanical. The provisions of the *International Mechanical Code* shall apply to the installation, alterations, repairs and replacement of mechanical systems, including equipment, appliances, fixtures, fittings and/or appurtenances, including ventilating, heating, cooling, air-conditioning and refrigeration systems, incinerators and other energy-related systems.

[A] 101.4.3 Plumbing. The provisions of the *International Plumbing Code* shall apply to the installation, *alteration*, repair and replacement of plumbing systems, including equipment, appliances, fixtures, fittings and appurtenances, and where connected to a water or sewage system and all aspects of a medical gas system. The provisions of the *International Private Sewage Disposal Code* shall apply to private sewage disposal systems.

[A] 101.4.4 Property maintenance. The provisions of the *International Property Maintenance Code* shall apply to existing structures and premises; equipment and facilities; light, ventilation, space heating, sanitation, life and fire safety hazards; responsibilities of owners, operators and occupants; and occupancy of existing premises and structures.

[A] 101.4.5 Fire prevention. The provisions of the *International Fire Code* shall apply to matters affecting or relating to structures, processes and premises from the hazard of fire and explosion arising from the storage, handling or use of structures, materials or devices; from conditions hazardous to life, property or public welfare in the occupancy of structures or premises; and from the construction, extension, *repair*, *alteration* or removal of fire suppression, *automatic sprinkler systems* and alarm systems or fire hazards in the structure or on the premises from occupancy or operation.

[A] 101.4.6 Energy. The provisions of the *International Energy Conservation Code* shall apply to all matters governing the design and construction of buildings for energy efficiency.

SECTION 102
APPLICABILITY

[A] 102.1 General. Where there is a conflict between a general requirement and a specific requirement, the specific requirement shall be applicable. Where, in any specific case, different sections of this code specify different materials, methods of construction or other requirements, the most restrictive shall govern.

[A] 102.2 Other laws. The provisions of this code shall not be deemed to nullify any provisions of local, state or federal law.

[A] 102.3 Application of references. References to chapter or section numbers, or to provisions not specifically identified by number, shall be construed to refer to such chapter, section or provision of this code.

[A] 102.4 Referenced codes and standards. The codes and standards referenced in this code shall be considered part of the requirements of this code to the prescribed extent of each such reference and as further regulated in Sections 102.4.1 and 102.4.2.

[A] 102.4.1 Conflicts. Where conflicts occur between provisions of this code and referenced codes and standards, the provisions of this code shall apply.

[A] 102.4.2 Provisions in referenced codes and standards. Where the extent of the reference to a referenced code or standard includes subject matter that is within the scope of this code or the International Codes listed in Section 101.4, the provisions of this code or the International Codes listed in Section 101.4, as applicable, shall take precedence over the provisions in the referenced code or standard.

[A] 102.5 Partial invalidity. In the event that any part or provision of this code is held to be illegal or void, this shall not have the effect of making void or illegal any of the other parts or provisions.

[A] 102.6 Existing structures. The legal occupancy of any structure existing on the date of adoption of this code shall be permitted to continue without change, except as is specifically covered in this code, the *International Property Maintenance Code* or the *International Fire Code*, or as is deemed necessary by the *building official* for the general safety and welfare of the occupants and the public.

PART 2—ADMINISTRATION AND ENFORCEMENT

SECTION 103
DEPARTMENT OF BUILDING SAFETY

[A] 103.1 Creation of enforcement agency. The Department of Building Safety is hereby created and the official in charge thereof shall be known as the *building official*.

[A] 103.2 Appointment. The *building official* shall be appointed by the chief appointing authority of the jurisdiction.

[A] 103.3 Deputies. In accordance with the prescribed procedures of this jurisdiction and with the concurrence of the appointing authority, the *building official* shall have the authority to appoint a deputy building official, the related technical officers, inspectors, plan examiners and other employees. Such employees shall have powers as delegated by the *building official*. For the maintenance of existing properties, see the *International Property Maintenance Code*.

SECTION 104
DUTIES AND POWERS OF BUILDING OFFICIAL

[A] 104.1 General. The *building official* is hereby authorized and directed to enforce the provisions of this code. The *building official* shall have the authority to render interpretations of this code and to adopt policies and procedures in order to clarify the application of its provisions. Such interpretations, policies and procedures shall be in compliance with the intent and purpose of this code. Such policies and procedures shall not have the effect of waiving requirements specifically provided for in this code.

[A] 104.2 Applications and permits. The *building official* shall receive applications, review *construction documents* and issue *permits* for the erection, and *alteration*, demolition and moving of buildings and structures, inspect the premises for which such *permits* have been issued and enforce compliance with the provisions of this code.

[A] 104.3 Notices and orders. The *building official* shall issue all necessary notices or orders to ensure compliance with this code.

[A] 104.4 Inspections. The *building official* shall make all of the required inspections, or the *building official* shall have the authority to accept reports of inspection by *approved agencies* or individuals. Reports of such inspections shall be in writing and be certified by a responsible officer of such *approved agency* or by the responsible individual. The *building official* is authorized to engage such expert opinion as deemed necessary to report upon unusual technical issues that arise, subject to the approval of the appointing authority.

[A] 104.5 Identification. The *building official* shall carry proper identification when inspecting structures or premises in the performance of duties under this code.

[A] 104.6 Right of entry. Where it is necessary to make an inspection to enforce the provisions of this code, or where the *building official* has reasonable cause to believe that there exists in a structure or upon a premises a condition which is contrary to or in violation of this code which makes the structure or premises unsafe, dangerous or hazardous, the *building official* is authorized to enter the structure or premises at reasonable times to inspect or to perform the duties imposed by this code, provided that if such structure or premises be occupied that credentials be presented to the occupant and entry requested. If such structure or premises is unoccupied, the *building official* shall first make a reasonable effort to locate the owner or other person having charge or control of the structure or premises and request entry. If entry is refused, the *building official* shall have recourse to the remedies provided by law to secure entry.

[A] 104.7 Department records. The *building official* shall keep official records of applications received, *permits* and certificates issued, fees collected, reports of inspections, and notices and orders issued. Such records shall be retained in the official records for the period required for retention of public records.

104.9 Approved materials and equipment. Materials, equipment, and devices shall be constructed or installed in accordance with approvals granted under the act or by the building official. The building official shall review reports prepared by recognized evaluation services and determine if the intent of the code is met. *

R 408.30404

[A] 104.9.1 Used materials and equipment. The use of used materials which meet the requirements of this code for new materials is permitted. Used equipment and devices shall not be reused unless *approved* by the *building official*.

[A] 104.10 Modifications. Wherever there are practical difficulties involved in carrying out the provisions of this code, the *building official* shall have the authority to grant modifications for individual cases, upon application of the owner or owner's representative, provided the *building official* shall first find that special individual reason makes the strict letter

CHAPTER 2
DEFINITIONS

SECTION 201
GENERAL

201.1 Scope. Unless otherwise expressly stated, the following words and terms shall, for the purposes of this code, have the meanings shown in this chapter.

201.2 Interchangeability. Words used in the present tense include the future; words stated in the masculine gender include the feminine and neuter; the singular number includes the plural and the plural, the singular.

201.3 Terms defined in other codes. Where terms are not defined in this code and are defined in the *International Energy Conservation Code*, *International Fuel Gas Code*, *International Fire Code*, *International Mechanical Code* or *International Plumbing Code*, such terms shall have the meanings ascribed to them as in those codes.

201.4 Terms not defined. Where terms are not defined through the methods authorized by this section, such terms shall have ordinarily accepted meanings such as the context implies.

SECTION 202
DEFINITIONS

24-HOUR CARE. The actual time that a person is an occupant within a facility for the purpose of receiving care. It shall not include a facility that is open for 24 hours and is capable of providing care to someone visiting the facility during any segment of the 24 hours.

AAC MASONRY. *Masonry* made of autoclaved aerated concrete (AAC) units, manufactured without internal reinforcement and bonded together using thin- or thick-bed *mortar*.

ACCESSIBLE. A *site*, *building*, *facility* or portion thereof that complies with Chapter 11.

ACCESSIBLE MEANS OF EGRESS. A continuous and unobstructed way of egress travel from any *accessible* point in a *building* or *facility* to a *public way*.

ACCESSIBLE ROUTE. A continuous, unobstructed path that complies with Chapter 11.

ACCESSIBLE UNIT. A *dwelling unit* or *sleeping unit* that complies with this code and the provisions for Accessible units in ICC A117.1.

ACCREDITATION BODY. An *approved*, third-party organization that is independent of the grading and inspection agencies, and the lumber mills, and that initially accredits and subsequently monitors, on a continuing basis, the competency and performance of a grading or inspection agency related to carrying out specific tasks.

ACT. "Act" means 1972 PA 230, MCL 125.1501 to 125.1531 and known as the Stille-DeRossett-Hale single state construction code act.

R 408.30415a

[A] ADDITION. An extension or increase in floor area or height of a building or structure.

ADHERED MASONRY VENEER. *Veneer* secured and supported through the adhesion of an *approved* bonding material applied to an *approved backing*.

ADOBE CONSTRUCTION. Construction in which the exterior *load-bearing* and *nonload-bearing walls* and partitions are of unfired clay *masonry units*, and floors, roofs and interior framing are wholly or partly of wood or other *approved* materials.

Adobe, stabilized. Unfired clay *masonry units* to which admixtures, such as emulsified asphalt, are added during the manufacturing process to limit the units' water absorption so as to increase their durability.

Adobe, unstabilized. Unfired clay *masonry units* that do not meet the definition of "Adobe, stabilized."

[F] AEROSOL. A product that is dispensed from an *aerosol container* by a propellant. Aerosol products shall be classified by means of the calculation of their chemical heats of combustion and shall be designated Level 1, Level 2 or Level 3.

Level 1 aerosol products. Those with a total chemical heat of combustion that is less than or equal to 8,600 British thermal units per pound (Btu/lb) (20 kJ/g).

Level 2 aerosol products. Those with a total chemical heat of combustion that is greater than 8,600 Btu/lb (20 kJ/g), but less than or equal to 13,000 Btu/lb (30 kJ/g).

Level 3 aerosol products. Those with a total chemical heat of combustion that is greater than 13,000 Btu/lb (30 kJ/g).

[F] AEROSOL CONTAINER. A metal can or a glass or plastic bottle designed to dispense an *aerosol*. Metal cans shall be limited to a maximum size of 33.8 fluid ounces (1000 ml). Glass or plastic bottles shall be limited to a maximum size of 4 fluid ounces (118 ml).

AGGREGATE. In roofing, crushed stone, crushed slag or water-worn gravel used for surfacing for *roof coverings*.

AGRICULTURAL OR AGRICULTURAL PURPOSES. "Agricultural or agricultural purposes" means of, or pertaining to, or connected with, or engaged in agriculture or tillage which is characterized by the act or business of cultivating or using land and soil for the production of crops for the use of animals or humans, and includes, but is not limited to, purposes related to agriculture, farming, dairying, pasturage, horticulture, floriculture, viticulture, and animal and poultry husbandry.

R 408.30415a

AIR-IMPERMEABLE INSULATION. "Air-impermeable insulation" means an insulation having air permanence equal to or less than 0.02 L/s-m^2 at 75 Pa. pressure differential tested according to ASTM E 2178 or E 283.

R 408.30415a

AIR-INFLATED STRUCTURE. A structure that uses air-pressurized membrane beams, arches or other elements to enclose space. Occupants of such a structure do not occupy the pressurized area used to support the structure.

AIR-SUPPORTED STRUCTURE. A structure wherein the shape of the structure is attained by air pressure and occupants of the structure are within the elevated pressure area. Air-supported structures are of two basic types:

Double skin. Similar to a single skin, but with an attached liner that is separated from the outer skin and provides an airspace which serves for insulation, acoustic, aesthetic or similar purposes.

Single skin. Where there is only the single outer skin and the air pressure is directly against that skin.

AISLE. An unenclosed *exit access* component that defines and provides a path of egress travel.

AISLE ACCESSWAY. That portion of an *exit access* that leads to an *aisle*.

[F] ALARM NOTIFICATION APPLIANCE. A *fire alarm system* component such as a bell, horn, speaker, light or text display that provides audible, tactile or visible outputs, or any combination thereof.

[F] ALARM SIGNAL. A signal indicating an emergency requiring immediate action, such as a signal indicative of fire.

[F] ALARM VERIFICATION FEATURE. A feature of *automatic* fire detection and alarm systems to reduce unwanted alarms wherein *smoke detectors* report alarm conditions for a minimum period of time, or confirm alarm conditions within a given time period, after being *automatically* reset, in order to be accepted as a valid alarm-initiation signal.

ALLOWABLE STRESS DESIGN. A method of proportioning structural members, such that elastically computed stresses produced in the members by *nominal loads* do not exceed *specified* allowable stresses (also called "working stress design").

[A] ALTERATION. Any construction or renovation to an *existing structure* other than *repair* or *addition*.

ALTERNATING TREAD DEVICE. A device that has a series of steps between 50 and 70 degrees (0.87 and 1.22 rad) from horizontal, usually attached to a center support rail in an alternating manner so that the user does not have both feet on the same level at the same time.

AMBULATORY CARE FACILITY. Buildings or portions thereof used to provide medical, surgical, psychiatric, nursing or similar care on a less than 24-hour basis to persons who are rendered *incapable of self-preservation* by the services provided.

ANCHOR. Metal rod, wire or strap that secures *masonry* to its structural support.

ANCHOR BUILDING. An exterior perimeter building of a group other than H having direct access to a *covered or open mall building* but having required *means of egress* independent of the mall.

ANCHORED MASONRY VENEER. *Veneer* secured with *approved* mechanical fasteners to an *approved backing*

ANNULAR SPACE. The opening around the penetrating item.

[F] ANNUNCIATOR. A unit containing one or more indicator lamps, alphanumeric displays or other equivalent means in which each indication provides status information about a circuit, condition or location.

[A] APPROVED. Acceptable to the *building official* or authority having jurisdiction.

[A] APPROVED AGENCY. An established and recognized agency regularly engaged in conducting tests or furnishing inspection services, when such agency has been *approved*.

APPROVED FABRICATOR. An established and qualified person, firm or corporation *approved* by the *building official* pursuant to Chapter 17 of this code.

APPROVED SOURCE. An independent person, firm or corporation, *approved* by the *building official*, who is competent and experienced in the application of engineering principles to materials, methods or systems analyses.

ARCHITECTURAL TERRA COTTA. Plain or ornamental hard-burned modified clay units, larger in size than *brick*, with glazed or unglazed ceramic finish.

AREA (for masonry).

Gross cross-sectional. The *area* delineated by the out-to-out *specified* dimensions of *masonry* in the plane under consideration.

Net cross-sectional. The *area* of *masonry units*, grout and *mortar* crossed by the plane under consideration based on out-to-out *specified* dimensions.

AREA, BUILDING. The area included within surrounding *exterior walls* (or *exterior walls* and *fire walls*) exclusive of vent *shafts* and *courts*. Areas of the building not provided with surrounding walls shall be included in the building area if such areas are included within the horizontal projection of the roof or floor above.

AREA OF REFUGE. An area where persons unable to use *stairways* can remain temporarily to await instructions or assistance during emergency evacuation.

AREAWAY. A subsurface space adjacent to a building open at the top or protected at the top by a grating or *guard*.

ASSEMBLY SEATING, MULTILEVEL. See "Multilevel assembly seating."

ATRIUM. An opening connecting two or more *stories* other than enclosed *stairways*, elevators, hoistways, escalators, plumbing, electrical, air-conditioning or other equipment, which is closed at the top and not defined as a mall. *Stories*, as used in this definition, do not include balconies within assembly groups or *mezzanines* that comply with Section 505.

extends down to bedrock and an uncased socket drilled into the bedrock.

[F] DRY-CHEMICAL EXTINGUISHING AGENT. A powder composed of small particles, usually of sodium bicarbonate, potassium bicarbonate, urea-potassium-based bicarbonate, potassium chloride or monoammonium phosphate, with added particulate material supplemented by special treatment to provide resistance to packing, resistance to moisture absorption (caking) and the proper flow capabilities.

DRY FLOODPROOFING. A combination of design modifications that results in a building or structure, including the attendant utility and sanitary facilities, being water tight with walls substantially impermeable to the passage of water and with structural components having the capacity to resist *loads* as identified in ASCE 7.

DURATION OF LOAD. The period of continuous application of a given *load*, or the aggregate of periods of intermittent applications of the same *load*.

DWELLING. A building that contains one or two *dwelling units* used, intended or designed to be used, rented, leased, let or hired out to be occupied for living purposes.

DWELLING UNIT. A single unit providing complete, independent living facilities for one or more persons, including permanent provisions for living, sleeping, eating, cooking and sanitation.

DWELLING UNIT OR SLEEPING UNIT, MULTISTORY. See definition for "*Multistory unit.*"

EGRESS COURT. A court or *yard* which provides access to a *public way* for one or more *exits*.

[F] ELEVATOR GROUP. A grouping of elevators in a *building* located adjacent or directly across from one another that responds to common hall call buttons.

[F] EMERGENCY ALARM SYSTEM. A system to provide indication and warning of emergency situations involving *hazardous materials*.

[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.

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.

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, *stairs*, *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.

EXISTING CONSTRUCTION. Any buildings and structures for which the *start of construction* commenced before the effective date of the community's first flood plain management code, ordinance or standard. "Existing construction" is also referred to as "existing structures."

EXISTING STRUCTURE (For Section 1612.2). See "Existing construction".

EXISTING STRUCTURE (For Chapter 34). A structure erected prior to the date of adoption of the appropriate code, or one for which a legal building *permit* has been issued.

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*, *interior exit ramps*, *exit passageways*, *exterior exit stairways* and *exterior exit 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 stair* or *exit access ramp*.

EXIT ACCESS RAMP. An interior *ramp* that is not a required *interior exit ramp*.

EXIT ACCESS STAIRWAY. An interior *stairway* that is not a required *interior exit stairway*.

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 HARDWARE, FIRE. See "Fire exit hardware."

EXIT, HORIZONTAL. A path of egress travel from one building to an area in another building on approximately the same level, or a path of egress travel through or around a wall or partition to an area on approximately the same level in the

CHAPTER 4

SPECIAL DETAILED REQUIREMENTS BASED ON USE AND OCCUPANCY

SECTION 401 SCOPE

401.1 Detailed use and occupancy requirements. In addition to the occupancy and construction requirements in this code, the provisions of this chapter apply to the special uses and occupancies described herein.

SECTION 402 COVERED MALL AND OPEN MALL BUILDINGS

Section 402 has been completely reorganized from the 2009 code; therefore, the • and •• margin indicators have not been included for clarity.

402.1 Applicability. The provisions of this section shall apply to buildings or structures defined herein as *covered or open mall buildings* not exceeding three floor levels at any point nor more than three *stories above grade plane*. Except as specifically required by this section, *covered and open mall buildings* shall meet applicable provisions of this code.

Exceptions:

1. Foyers and lobbies of Groups B, R-1 and R-2 are not required to comply with this section.
2. Buildings need not comply with the provisions of this section where they totally comply with other applicable provisions of this code.

402.1.1 Open space. A *covered mall building* and attached *anchor buildings* and parking garages shall be surrounded on all sides by a permanent open space or not less than 60 feet (18 288 mm). An *open mall building* and *anchor buildings* and parking garages adjoining the perimeter line shall be surrounded on all sides by a permanent open space of not less than 60 feet (18 288 mm).

Exception: The permanent open space of 60 feet (18 288 mm) shall be permitted to be reduced to not less than 40 feet (12 192 mm), provided the following requirements are met:

1. The reduced open space shall not be allowed for more than 75 percent of the perimeter of the *covered or open mall building* and *anchor buildings;*
2. The *exterior wall* facing the reduced open space shall have a *fire-resistance rating* of not less than 3 hours;
3. Openings in the *exterior wall* facing the reduced open space shall have opening protectives with a *fire protection rating* of not less than 3 hours; and
4. Group E, H, I or R occupancies are not located within the *covered or open mall building* or *anchor buildings*.

402.1.2 Open mall building perimeter line. For the purpose of this code, a perimeter line shall be established. The perimeter line shall encircle all buildings and structures which comprise the *open mall building* and shall encompass any open-air interior walkways, open-air courtyards or similar open-air spaces. The perimeter line shall define the extent of the *open mall building*. *Anchor buildings* and parking structures shall be outside of the perimeter line and are not considered as part of the *open mall building*.

402.2 Definitions. The following terms are defined in Chapter 2:

ANCHOR BUILDING.

COVERED MALL BUILDING.

Mall.

Open mall.

Open mall building.

FOOD COURT.

GROSS LEASABLE AREA.

402.3 Lease plan. Each *owner* of a *covered mall building* or of an *open mall building* shall provide both the building and fire departments with a lease plan showing the location of each occupancy and its *exits* after the certificate of occupancy has been issued. No modifications or changes in occupancy or use shall be made from that shown on the lease plan without prior approval of the *building official*.

402.4 Construction. The construction of *covered and open mall buildings*, *anchor buildings* and parking garages associated with a *mall* building shall comply with Sections 402.4.1 through 402.4.3.

402.4.1 Area and types of construction. The *building area* of any *covered mall or open mall building*, including *anchor buildings*, of Type I, II, III and IV construction shall not be limited provided the *anchor buildings* do not exceed three *stories above grade plane*.

The construction type of *open parking garages* and enclosed parking garages shall comply with Sections 406.5 and 406.6, respectively.

Exception: The type of construction allowable *building height* and *building area* of *anchor buildings* greater than three *stories above grade plane* shall comply with Section 503, as modified by Sections 504 and 506.

402.4.2 Fire-resistance-rated separation. Fire-resistance-rated separation is not required between tenant spaces and the *mall*. Fire-resistance-rated separation is not required between a *food court* and adjacent tenant spaces or the *mall*.

ing unit are permitted to be classified as *dwelling units* with accessory occupancies in accordance with Section 508.2.

419.1.1 Limitations. The following shall apply to all live/work areas:

1. The *live/work unit* is permitted to be not greater than 3,000 square feet (279 m^2) in area;
2. The nonresidential area is permitted to be not more than 50 percent of the area of each *live/work unit*;
3. The nonresidential area function shall be limited to the first or main floor only of the *live/work unit*; and
4. Not more than five nonresidential workers, or employees are allowed to occupy the nonresidential area at any one time.

419.2 Occupancies. *Live/work units* shall be classified as a Group R-2 occupancy. Separation requirements found in Sections 420 and 508 shall not apply within the *live/work unit* where the *live/work unit* is in compliance with Section 419. Nonresidential uses which would otherwise be classified as either a Group H or S occupancy shall not be permitted in a *live/work unit*.

Exception: Storage shall be permitted in the *live/work unit* provided the aggregate area of storage in the nonresidential portion of the *live/work unit* shall be limited to 10 percent of the space dedicated to nonresidential activities.

419.3 Means of egress. Except as modified by this section, the *means of egress* components for a *live/work unit* shall be designed in accordance with Chapter 10 for the function served.

419.3.1 Egress capacity. The egress capacity for each element of the *live/work unit* shall be based on the *occupant load* for the function served in accordance with Table 1004.1.2.

419.3.2 Spiral stairways. *Spiral stairways* that conform to the requirements of Section 1009.12 shall be permitted.

419.4 Vertical openings. Floor openings between floor levels of a *live/work unit* are permitted without enclosure.

[F] 419.5 Fire protection. The *live/work unit* shall be provided with a monitored *fire alarm* system where required by Section 907.2.9 and an *automatic sprinkler system* in accordance with Section 903.2.8.

419.6 Structural. Floor loading for the areas within a *live/work unit* shall be designed to conform to Table 1607.1 based on the function within the space.

419.7 Accessibility. Accessibility shall be designed in accordance with Chapter 11 for the function served.

419.8 Ventilation. The applicable *ventilation* requirements of the *International Mechanical Code* shall apply to each area within the *live/work unit* for the function within that space.

419.9 Plumbing facilities. The nonresidential area of the *live/work unit* shall be provided with minimum plumbing facilities as specified by Chapter 29, based on the function of the nonresidential area. Where the nonresidential area of the *live/work unit* is required to be *accessible* by Section 1103.2.13, the plumbing fixtures specified by Chapter 29 shall be *accessible*.

SECTION 420
GROUPS I-1, R-1, R-2, R-3

420.1 General. Occupancies in Groups I-1, R-1, R-2 and R-3 shall comply with the provisions of Sections 420.1 through 420.5 and other applicable provisions of this code.

420.2 Separation walls. Walls separating *dwelling units* in the same building, walls separating *sleeping units* in the same building and walls separating *dwelling* or *sleeping units* from other occupancies contiguous to them in the same building shall be constructed as *fire partitions* in accordance with Section 708.

420.3 Horizontal separation. Floor assemblies separating *dwelling units* in the same buildings, floor assemblies separating *sleeping units* in the same building and floor assemblies separating *dwelling* or *sleeping units* from other occupancies contiguous to them in the same building shall be constructed as *horizontal assemblies* in accordance with Section 711.

[F] 420.4 Automatic sprinkler system. Group R occupancies shall be equipped throughout with an *automatic sprinkler system* in accordance with Section 903.2.8. Group I-1 occupancies shall be equipped throughout with an *automatic sprinkler system* in accordance with Section 903.2.6. Quick-response or residential automatic sprinklers shall be installed in accordance with Section 903.3.2.

[F] 420.5 Smoke detection and fire alarm systems. *Fire alarm* systems and *smoke alarms* shall be provided in Group I-1, R-1 and R-2 occupancies in accordance with Sections 907.2.6, 907.2.8 and 907.2.9, respectively. Single-or multiple-station *smoke alarms* shall be in accordance with Section 907.2.11.

SECTION 421
HYDROGEN CUTOFF ROOMS

[F] 421.1 General. Where required by the *International Fire Code*, hydrogen cutoff rooms shall be designed and constructed in accordance with Sections 421.1 through 421.8.

[F] 421.2 Definitions. The following terms are defined in Chapter 2:

GASEOUS HYDROGEN SYSTEM.

HYDROGEN CUTOFF ROOM.

[F] 421.3 Location. Hydrogen cutoff rooms shall not be located below grade.

[F] 421.4 Design and construction. Hydrogen cutoff rooms shall be classified with respect to occupancy in accordance with Section 302.1 and separated from other areas of the building by not less than 1-hour *fire barriers* constructed in

on the intersection for its entire length so as not to dislodge, loosen or otherwise impair its ability to accommodate expected building movements and to retard the passage of fire and hot gases.

707.10 Ducts and air transfer openings. Penetrations in a *fire barrier* by ducts and air transfer openings shall comply with Section 717.

SECTION 708
FIRE PARTITIONS

708.1 General. The following wall assemblies shall comply with this section.

1. Walls separating *dwelling units* in the same building as required by Section 420.2.
2. Walls separating *sleeping units* in the same building as required by Section 420.2.
3. Walls separating tenant spaces in *covered and open mall buildings* as required by Section 402.4.2.1.
4. Corridor walls as required by Section 1018.1.
5. Elevator lobby separation as required by Section 713.14.1.

708.2 Materials. The walls shall be of materials permitted by the building type of construction.

708.3 Fire-resistance rating. Fire partitions shall have a *fire-resistance rating* of not less than 1 hour.

Exceptions:

1. Corridor walls permitted to have a $^1/_2$ hour *fire-resistance rating* by Table 1018.1.
2. *Dwelling unit* and *sleeping unit* separations in buildings of Type IIB, IIIB and VB construction shall have *fire-resistance ratings* of not less than $^1/_2$ hour in buildings equipped throughout with an *automatic sprinkler system* in accordance with Section 903.3.1.1.

708.4 Continuity. Fire partitions shall extend from the top of the foundation or floor/ceiling assembly below to the underside of the floor or roof sheathing, slab or deck above or to the fire-resistance-rated floor/ceiling or roof/ceiling assembly above, and shall be securely attached thereto. In combustible construction where the *fire partitions* are not required to be continuous to the sheathing, deck or slab, the space between the ceiling and the sheathing, deck or slab above shall be fireblocked or draftstopped in accordance with Sections 718.2 and 718.3 at the partition line. The supporting construction shall be protected to afford the required *fire-resistance rating* of the wall supported, except for walls separating tenant spaces in *covered and open mall buildings*, walls separating *dwelling units*, walls separating *sleeping units* and *corridor* walls, in buildings of Type IIB, IIIB and VB construction.

Exceptions:

1. The wall need not be extended into the crawl space below where the floor above the crawl space has a minimum 1-hour *fire-resistance rating*.
2. Where the room-side fire-resistance-rated membrane of the *corridor* is carried through to the underside of the floor or roof sheathing, deck or slab of a fire-resistance-rated floor or roof above, the ceiling of the *corridor* shall be permitted to be protected by the use of ceiling materials as required for a 1-hour fire-resistance-rated floor or roof system.
3. Where the *corridor* ceiling is constructed as required for the *corridor* walls, the walls shall be permitted to terminate at the upper membrane of such ceiling assembly.
4. The fire partitions separating tenant spaces in a *covered or open mall building*, complying with Section 402.7.2, are not required to extend beyond the underside of a ceiling that is not part of a fire-resistance-rated assembly. A wall is not required in *attic* or ceiling spaces above tenant separation walls.
5. Attic fireblocking or draftstopping is not required at the partition line in Group R-2 buildings that do not exceed four *stories above grade plane*, provided the *attic* space is subdivided by draftstopping into areas not exceeding 3,000 square feet (279 m^2) or above every two *dwelling units*, whichever is smaller.
6. Fireblocking or draftstopping is not required at the partition line in buildings equipped with an *automatic sprinkler system* installed throughout in accordance with Section 903.3.1.1 or 903.3.1.2, provided that automatic sprinklers are installed in combustible floor/ceiling and roof/ceiling spaces.

708.5 Exterior walls. Where *exterior walls* serve as a part of a required fire-resistance-rated separation, such walls shall comply with the requirements of Section 705 for *exterior walls*, and the fire-resistance-rated separation requirements shall not apply.

Exception: Exterior walls required to be fire-resistance rated in accordance with Section 1019.2 for exterior egress balconies, Section 1022.7 for interior exit stairways and ramps and Section 102.6.6 for exterior exit stairways and ramps.

708.6 Openings. Openings in a *fire partition* shall be protected in accordance with Section 716.

708.7 Penetrations. Penetrations of *fire partitions* shall comply with Section 714.

708.8 Joints. Joints made in or between *fire partitions* shall comply with Section 715.

708.9 Ducts and air transfer openings. Penetrations in a *fire partition* by ducts and air transfer openings shall comply with Section 717.

SECTION 709
SMOKE BARRIERS

709.1 General. *Smoke barriers* shall comply with this section.

709.2 Materials. *Smoke barriers* shall be of materials permitted by the building type of construction.

SECTION 711
HORIZONTAL ASSEMBLIES

711.1 General. Floor and roof assemblies required to have a *fire-resistance rating* shall comply with this section. Nonfire-resistance-rated floor and roof assemblies shall comply with Section 714.4.2.

711.2 Materials. The floor and roof assemblies shall be of materials permitted by the building type of construction.

711.3 Fire-resistance rating. The *fire-resistance rating* of floor and roof assemblies shall not be less than that required by the building type of construction. Where the floor assembly separates mixed occupancies, the assembly shall have a *fire-resistance rating* of not less than that required by Section 508.4 based on the occupancies being separated. Where the floor assembly separates a single occupancy into different *fire areas*, the assembly shall have a *fire-resistance rating* of not less than that required by Section 707.3.10. *Horizontal assemblies* separating *dwelling units* in the same building and *horizontal assemblies* separating *sleeping units* in the same building shall be a minimum of 1-hour fire-resistance-rated construction.

Exception: *Dwelling unit* and *sleeping unit* separations in buildings of Type IIB, IIIB and VB construction shall have *fire-resistance ratings* of not less than $^1/_2$ hour in buildings equipped throughout with an *automatic sprinkler system* in accordance with Section 903.3.1.1.

711.3.1 Ceiling panels. Where the weight of lay-in ceiling panels, used as part of fire-resistance-rated floor/ceiling or roof/ceiling assemblies, is not adequate to resist an upward force of 1 pound per square foot (48 Pa), wire or other *approved* devices shall be installed above the panels to prevent vertical displacement under such upward force.

711.3.2 Access doors. Access doors shall be permitted in ceilings of fire-resistance-rated floor/ceiling and roof/ceiling assemblies provided such doors are tested in accordance with ASTM E 119 or UL 263 as horizontal assemblies and labeled by an *approved agency* for such purpose.

711.3.3 Unusable space. In 1-hour fire-resistance-rated floor assemblies, the ceiling membrane is not required to be installed over unusable crawl spaces. In 1-hour fire-resistance-rated roof assemblies, the floor membrane is not required to be installed where unusable *attic* space occurs above.

711.4 Continuity. Assemblies shall be continuous without openings, penetrations or joints except as permitted by this section and Sections 712.1, 714.4, 715, 1009.3 and 1022.1. Skylights and other penetrations through a fire-resistance-rated roof deck or slab are permitted to be unprotected, provided that the structural integrity of the fire-resistance-rated roof assembly is maintained. Unprotected skylights shall not be permitted in roof assemblies required to be fire-resistance rated in accordance with Section 705.8.6. The supporting construction shall be protected to afford the required *fire-resistance rating* of the *horizontal assembly* supported.

Exception: In buildings of Type IIB, IIIB or VB construction, the construction supporting the *horizontal assembly* is not required to be fire-resistance-rated at the following:

1. Horizontal assemblies at the separations of incidental uses as specified by Table 509, provided the required *fire-resistance rating* does not exceed 1 hour.
2. Horizontal assemblies at the separations of *dwelling units* and *sleeping units* as required by Section 420.3.
3. Horizontal assemblies at *smoke barriers* constructed in accordance with Section 709.

711.4.1 Nonfire-resistance-rated assemblies. Joints in or between floor assemblies without a required *fire-resistance rating* shall comply with one of the following:

1. The joint shall be concealed within the cavity of a wall.
2. The joint shall be located above a ceiling.
3. The joint shall be sealed, treated or covered with an *approved* material or system to resist the free passage of flame and the products of combustion.

Exception: Joints meeting one of the joint exceptions listed in Section 715.1.

711.5 Penetrations. Penetrations of *horizontal assemblies*, whether concealed or unconcealed, shall comply with Section 714.

711.6 Joints. Joints made in or between *horizontal assemblies* shall comply with Section 715. The void created at the intersection of a floor/ceiling assembly and an exterior curtain wall assembly shall be protected in accordance with Section 715.4.

711.7 Ducts and air transfer openings. Penetrations in *horizontal assemblies* by ducts and air transfer openings shall comply with Section 717.

711.8 Floor fire door assemblies. Floor *fire door* assemblies used to protect openings in fire-resistance-rated floors shall be tested in accordance with NFPA 288, and shall achieve a *fire-resistance rating* not less than the assembly being penetrated. Floor *fire door* assemblies shall be labeled by an *approved agency*. The *label* shall be permanently affixed and shall specify the manufacturer, the test standard and the *fire-resistance rating*.

711.9 Smoke barrier. Where *horizontal assemblies* are required to resist the movement of smoke by other sections of this code in accordance with the definition of *smoke barrier*, penetrations and joints in such *horizontal assemblies* shall be protected as required for *smoke barriers* in accordance with Sections 714.5 and 715.6. Regardless of the number of *stories* connected by elevator shaft enclosures, doors located in elevator shaft enclosures that penetrate the *horizontal assembly* shall be protected by enclosed elevator lobbies complying with Section 713.14.1. Openings through *horizontal assemblies* shall be protected by shaft enclosures complying with Section 713. *Horizontal assemblies* shall not be allowed to have unprotected vertical openings.

CHAPTER 14
EXTERIOR WALLS

SECTION 1401
GENERAL

1401.1 Scope. The provisions of this chapter shall establish the minimum requirements for exterior walls; *exterior wall* coverings; *exterior wall* openings; exterior windows and doors; architectural *trim*; balconies and similar projections; and bay and oriel windows.

SECTION 1402
DEFINITIONS

1402.1 Definitions. The following terms are defined in Chapter 2:

ADHERED MASONRY VENEER.

ANCHORED MASONRY VENEER.

BACKING.

EXTERIOR INSULATION AND FINISH SYSTEMS (EIFS).

EXTERIOR INSULATION AND FINISH SYSTEMS (EIFS) WITH DRAINAGE.

EXTERIOR WALL.

EXTERIOR WALL COVERING.

EXTERIOR WALL ENVELOPE.

FIBER-CEMENT SIDING.

HIGH-PRESSURE DECORATIVE EXTERIOR-GRADE COMPACT LAMINATE (HPL).

HIGH-PRESSURE DECORATIVE EXTERIOR-GRADE COMPACT LAMINATE (HPL) SYSTEM.

METAL COMPOSITE MATERIAL (MCM).

METAL COMPOSITE MATERIAL (MCM) SYSTEM.

POLYPROPYLENE SIDING.

PORCELAIN TILE.

VENEER.

VINYL SIDING.

WATER-RESISTIVE BARRIER.

SECTION 1403
PERFORMANCE REQUIREMENTS

1403.1 General. The provisions of this section shall apply to exterior walls, wall coverings and components thereof.

1403.2 Weather protection. Exterior walls shall provide the building with a weather-resistant *exterior wall envelope*. The *exterior wall envelope* shall include flashing, as described in Section 1405.4. The *exterior wall envelope* shall be designed and constructed in such a manner as to prevent the accumulation of water within the wall assembly by providing a *water-resistive barrier* behind the exterior veneer, as described in Section 1404.2, and a means for draining water that enters the assembly to the exterior. Protection against condensation in the *exterior wall* assembly shall be provided in accordance with Section 1405.3.

Exceptions:

1. A weather-resistant *exterior wall envelope* shall not be required over concrete or masonry walls designed in accordance with Chapters 19 and 21, respectively.
2. Compliance with the requirements for a means of drainage, and the requirements of Sections 1404.2 and 1405.4, shall not be required for an *exterior wall envelope* that has been demonstrated through testing to resist wind-driven rain, including joints, penetrations and intersections with dissimilar materials, in accordance with ASTM E 331 under the following conditions:
   2.1. *Exterior wall envelope* test assemblies shall include at least one opening, one control joint, one wall/eave interface and one wall sill. All tested openings and penetrations shall be representative of the intended end-use configuration.
   2.2. *Exterior wall envelope* test assemblies shall be at least 4 feet by 8 feet (1219 mm by 2438 mm) in size.
   2.3. *Exterior wall envelope* assemblies shall be tested at a minimum differential pressure of 6.24 pounds per square foot (psf) (0.297 kN/m^2).
   2.4. *Exterior wall envelope* assemblies shall be subjected to a minimum test exposure duration of 2 hours.

   The *exterior wall envelope* design shall be considered to resist wind-driven rain where the results of testing indicate that water did not penetrate control joints in the *exterior wall* envelope, joints at the perimeter of openings or intersections of terminations with dissimilar materials.
3. Exterior insulation and finish systems (EIFS) complying with Section 1408.4.1.

1403.3 Structural. *Exterior walls*, and the associated openings, shall be designed and constructed to resist safely the superimposed loads required by Chapter 16.

1403.4 Fire resistance. *Exterior walls* shall be fire-resistance rated as required by other sections of this code with opening protection as required by Chapter 7.

1403.5 Vertical and lateral flame propagation. Exterior walls on buildings of Type I, II, III or IV construction that are greater than 40 feet (12 192 mm) in height above grade plane

inch (7.9 mm) head diameter and $^{1}/_{8}$-inch (3.18 mm) shank diameter. The nails shall be corrosion resistant and shall be long enough to penetrate the studs or nailing strip at least $^{3}/_{4}$ inch (19 mm). Where the siding is installed horizontally, the fastener spacing shall not exceed 16 inches (406 mm) horizontally and 12 inches (305 mm) vertically. Where the siding is installed vertically, the fastener spacing shall not exceed 12 inches (305 mm) horizontally and 12 inches (305 mm) vertically.

1405.15 Cement plaster. Cement plaster applied to exterior walls shall conform to the requirements specified in Chapter 25.

1405.16 Fiber-cement siding. Fiber-cement siding complying with Section 1404.10 shall be permitted on exterior walls of Type I, II, III, IV and V construction for wind pressure resistance or wind speed exposures as indicated by the manufacturer's listing and *label* and *approved* installation instructions. Where specified, the siding shall be installed over sheathing or materials *listed* in Section 2304.6 and shall be installed to conform to the *water-resistive barrier* requirements in Section 1403. Siding and accessories shall be installed in accordance with *approved* manufacturer's instructions. Unless otherwise specified in the *approved* manufacturer's instructions, nails used to fasten the siding to wood studs shall be corrosion-resistant round head smooth shank and shall be long enough to penetrate the studs at least 1 inch (25 mm). For metal framing, all-weather screws shall be used and shall penetrate the metal framing at least three full threads.

1405.16.1 Panel siding. Fiber-cement panels shall comply with the requirements of ASTM C 1186, Type A, minimum Grade II. Panels shall be installed with the long dimension either parallel or perpendicular to framing. Vertical and horizontal joints shall occur over framing members and shall be sealed with caulking, covered with battens or shall be designed to comply with Section 1403.2. Panel siding shall be installed with fasteners in accordance with the *approved* manufacturer's instructions.

1405.16.2 Lap siding. Fiber-cement lap siding having a maximum width of 12 inches (305 mm) shall comply with the requirements of ASTM C 1186, Type A, minimum Grade II. Lap siding shall be lapped a minimum of $1^{1}/_{4}$ inches (32 mm) and lap siding not having tongue-and-groove end joints shall have the ends sealed with caulking, covered with an H-section joint cover, located over a strip of flashing or shall be designed to comply with Section 1403.2. Lap siding courses shall be installed with the fastener heads exposed or concealed in accordance with the *approved* manufacturer's instructions.

1405.17 Fastening. Weather boarding and wall coverings shall be securely fastened with aluminum, copper, zinc, zinc-coated or other *approved* corrosion-resistant fasteners in accordance with the nailing schedule in Table 2304.9.1 or the *approved* manufacturer's installation instructions. Shingles and other weather coverings shall be attached with appropriate standard-shingle nails to furring strips securely nailed to studs, or with *approved* mechanically bonding nails, except where sheathing is of wood not less than 1-inch (25 mm) nominal thickness or of wood structural panels as specified in Table 2308.9.3(3).

1405.18 Polypropylene siding. Polypropylene siding conforming to the requirements of this section and complying with Section 1404.12 shall be limited to exterior walls of Type VB construction located in areas where the wind speed specified in Chapter 16 does not exceed 100 miles per hour (45 m/s) and the building height is less than or equal to 40 feet (12 192 mm) in Exposure C. Where construction is located in areas where the basic wind speed exceeds 100 miles per hour (45 m/s), or building heights are in excess of 40 feet (12 192 mm), tests or calculations indicating compliance with Chapter 16 shall be submitted. Polypropylene siding shall be installed in accordance with the manufacturer's installation instructions. Polypropylene siding shall be secured to the building so as to provide weather protection for the exterior walls of the building.

SECTION 1406
COMBUSTIBLE MATERIALS ON THE EXTERIOR SIDE OF EXTERIOR WALLS

1406.1 General. Section 1406 shall apply to *exterior wall coverings*; balconies and similar projections; and bay and oriel windows constructed of combustible materials.

1406.2 Combustible exterior wall coverings. Combustible *exterior wall coverings* shall comply with this section.

Exception: Plastics complying with Chapter 26.

1406.2.1 Type I, II, III and IV construction. On buildings of Type I, II, III and IV construction, exterior wall coverings shall be permitted to be constructed of combustible materials, complying with the following limitations:

1. Combustible exterior wall coverings shall not exceed 10 percent of an exterior wall surface area where the fire separation distance is 5 feet (1524 mm) or less.
2. Combustible exterior wall coverings shall be limited to 40 feet (12 192 mm) in height above grade plane.
3. Combustible exterior wall coverings constructed of fire-retardant-treated wood complying with Section 2303.2 for exterior installation shall not be limited in wall surface area where the fire separation distance is 5 feet (1524 mm) or less and shall be permitted up to 60 feet (18 288 mm) in height above grade plane regardless of the fire separation distance.
4. Wood veneers shall comply with Section 1405.5.

1406.2.1.1 Ignition resistance. Where permitted by Section 1406.2.1, combustible exterior wall coverings shall be tested in accordance with NFPA 268.

Exceptions:

1. Wood or wood-based products.
2. Other combustible materials covered with an exterior covering other than vinyl sidings listed in Table 1405.2.
3. Aluminum having a minimum thickness of 0.019 inch (0.48 mm).

1406.2.1.1.1 Fire separation 5 feet or less. Where installed on exterior walls having a fire separation distance of 5 feet (1524 mm) or less, combustible exterior wall coverings shall not exhibit sustained flaming as defined in NFPA 268.

1406.2.1.1.2 Fire separation greater than 5 feet. For fire separation distances greater than 5 feet (1524 mm), any exterior wall covering shall be permitted that has been exposed to a reduced level of incident radiant heat flux in accordance with the NFPA 268 test method without exhibiting sustained flaming. The minimum fire separation distance required for the exterior wall covering shall be determined from Table 1406.2.1.1.2 based on the maximum tolerable level of incident radiant heat flux that does not cause sustained flaming of the exterior wall covering.

TABLE 1406.2.1.1.2
MINIMUM FIRE SEPARATION FOR COMBUSTIBLE EXTERIOR WALL COVERINGS

FIRE SEPARATION DISTANCE (feet)	TOLERABLE LEVEL INCIDENT RADIANT HEAT ENERGY(kW/m^2)	FIRE SEPARATION DISTANCE (feet)	TOLERABLE LEVEL INCIDENT RADIANT HEAT ENERGY(kW/m^2)
5	12.5	16	5.9
6	11.8	17	5.5
7	11.0	18	5.2
8	10.3	19	4.9
9	9.6	20	4.6
10	8.9	21	4.4
11	8.3	22	4.1
12	7.7	23	3.9
13	7.2	24	3.7
14	6.7	25	3.5
15	6.3		

For SI: 1 foot = 304.8 mm, 1 $Btu/H^2 \times °F = 0.0057\ kW/m^2 \times K$.

1406.2.2 Location. Combustible exterior wall coverings located along the top of exterior walls shall be completely backed up by the exterior wall and shall not extend over or above the top of the exterior wall.

1406.2.3 Fireblocking. Where the combustible exterior wall covering is furred out from the exterior wall and forms a solid surface, the distance between the back of the exterior wall covering and the exterior wall shall not exceed $1^5/_8$ inches (41 mm). The concealed space thereby created shall be fireblocked in accordance with Section 718.

Exception: The distance between the back of the exterior wall covering and the exterior wall shall be permitted to exceed $1^5/_8$ inches (41 mm) where the concealed space is not required to be fireblocked by Section 718.

1406.3 Balconies and similar projections. Balconies and similar projections of combustible construction other than fire-retardant-treated wood shall be fire-resistance rated where required by Table 601 for floor construction or shall be of Type IV construction in accordance with Section 602.4. The aggregate length of the projections shall not exceed 50 percent of the building's perimeter on each floor.

Exceptions:

1. On buildings of Type I and II construction, three stories or less above *grade plane*, *fire-retardant-treated wood* shall be permitted for balconies, porches, decks and exterior stairways not used as required exits.
2. Untreated wood is permitted for pickets and rails or similar guardrail devices that are limited to 42 inches (1067 mm) in height.
3. Balconies and similar projections on buildings of Type III, IV and V construction shall be permitted to be of Type V construction, and shall not be required to have a *fire-resistance rating* where sprinkler protection is extended to these areas.
4. Where sprinkler protection is extended to the balcony areas, the aggregate length of the balcony on each floor shall not be limited.

1406.4 Bay and oriel windows. Bay and oriel windows shall conform to the type of construction required for the building to which they are attached.

Exception: *Fire-retardant-treated wood* shall be permitted on buildings three stories or less above grade plane of Type I, II, III or IV construction.

SECTION 1407
METAL COMPOSITE MATERIALS (MCM)

1407.1 General. The provisions of this section shall govern the materials, construction and quality of metal composite materials (MCM) for use as *exterior wall coverings* in addition to other applicable requirements of Chapters 14 and 16.

1407.1.1 Plastic core. The plastic core of the MCM shall not contain foam plastic insulation as defined in Section 2602.1.

1407.2 Exterior wall finish. MCM used as *exterior wall* finish or as elements of balconies and similar projections and bay and oriel windows to provide cladding or weather resistance shall comply with Sections 1407.4 through 1407.14.

1407.3 Architectural trim and embellishments. MCM used as architectural *trim* or embellishments shall comply with Sections 1407.7 through 1407.14.

1407.4 Structural design. MCM systems shall be designed and constructed to resist wind loads as required by Chapter 16 for components and cladding.

1407.5 Approval. Results of *approved* tests or an engineering analysis shall be submitted to the *building official* to verify compliance with the requirements of Chapter 16 for wind loads.

1407.6 Weather resistance. MCM systems shall comply with Section 1403 and shall be designed and constructed to resist wind and rain in accordance with this section and the manufacturer's installation instructions.

BBA18-002

CITY OF ANN ARBOR
RECEIVED
MAR 20 2018

APPLICATION FOR VARIANCE
BUILDING BOARD OF APPEALS

PLANNING & DEVELOPMENT SERVICES

Section 1: Applicant Information

Name of Applicant: Mike Parks of Cypress Partners on behalf of BRE Nixon Rd Associates (owner)

Address of Applicant: 280 W. Maple Road - Suite 230 Birmingham, MI 48009

Daytime Phone: (248) 540-9300

Fax: (248) 988-8867

Email: mparks@cypresspartners.biz

Applicant's Relationship to Property: Cypress Partners is auth agent on behalf of BRE Nixon Rd

Section 2: Property Information

Address of Property: 3380 Nixon Road - Ann Arbor, MI

Zoning Classification: R4A - Multiple Family Dwelling District

Tax ID# (if known): 09-09-10-401-001

Section 3: Request Information

■ Variance

Chapter(s) and Section(s) from which a variance is requested:	REQUIRED dimension:	PROPOSED dimension:
Application of Section 420 of the Michigan Building Code to the exterior balconies		
Example: 2003 Building Code, Sec 5:26	*Example: 7' Ceiling Clearance*	*Example: 6'5" under landing*

Give a detailed description of the work you are proposing and why it will require a variance (attach additional sheets if necessary) Please refer to attached documentation for additional detail and information.

We are appealing the interpretation of the requirement for providing a 1-hour separation between the exterior balconies of the apartment units. The interpretation is that the exterior balconies are considered "Building Area" and subject to the requirements of Section 420. Our interpretation is the Exception in Section 1406.3 would allow unrated balconies.

Section 4: Variance Request (If not applying for a variance, skip to section 5)

The City of Ann Arbor Building Board of Appeals has the powers granted by State law and Building Codes. A variance may be granted by the Building Board of Appeals only in cases involving practical difficulties or unnecessary hardships when **ALL** of the following is found **TRUE**. Please provide a complete response to each item below. These responses, together with the required materials in Section 5 of this application, will form the basis for evaluation of the request by staff and the Building Board of Appeals.

1. Are there hardships or practical difficulties to complying with the Code? Are these hardships or practical difficulties an exception or unique to the property compared to other properties in the City?

We are appealing an interpretation by the Building Official that results in requiring the exterior balconies to be fire rated construction. The practical hardship is that our interpretation and the response from the International Code Council is that there is an exception that is applicable that we are not able to use that would allow for unrated balconies with the addition of sprinkler protection.

2. Are the hardships or practical difficulties more than mere inconvenience, inability to obtain a higher financial return, or both? *(explain)*

The hardship or practical difficulty as noted above is that we are not allowed to use what we and the International Code Council (ICC) (refer to attached ICC response) have interpreted as an acceptable means of construction for the balconies.

3. What effect will granting the variance have on the neighboring properties?

Granting the variance will have no affect on the neighboring properties.

4. What physical characteristics of your property in terms of size, shape, location or topography prevent you from using it in a way that is consistent with the Code?

Our appeal is to an interpretation of the building code and as such there are no physical property restrictions.

5. Is the condition which prevents you from complying with the ordinance self-imposed? How did the condition come about?

We are appealing the interpretations by the Building Department which impose requirements that per our interpretation and the interpretation by the International Code Council are not applicable.

Section 5: Required Materials

The following materials are required for all variance requests. Failure to provide these materials will result in an incomplete application and will delay staff review and Building Board of Appeals consideration of the request. The materials listed below must accompany the application and constitute an inseparable part of the application.

All materials must be provided on **8 ½" by 11" sheets. If incomplete, you will be scheduled for the NEXT MEETING DATE ON THE FOLLOWING MONTH.**

- ❑ State proposed use of the property, size of lot and size and type of proposed changes.
- ❑ Building floor plans showing interior rooms, including dimensions.
- ❑ Photographs of the property and any existing buildings involved in the request.
- ❑ Any other graphic or written materials that support the request.

Section 7: Acknowledgement

SIGNATURES

I, the applicant, request a variance from the above named Chapter(s) and Section(s) of the State of Michigan Building Residential/Commercial Code(s) for the stated reasons, in accordance with the materials attached hereto.

(248) 540-9300
Phone Number

Signature

mparks@cypresspartners.biz
Email Address

Mike Parks
Print Name

CITY OF ANN ARBOR
RECEIVED
MAR 20 2018
PLANNING & DEVELOPMENT SERVICES

STAFF USE ONLY

Date Submitted:

Fee Paid: $500 CK 4275

File No.: _____ Date of Public Hearing _____

Pre-filing Staff Reviewer & Date _____ BBA Action:

_____

Pre-Filing Review: _____

Staff Reviewer & Date: _____

ConceptDesign
ARCHITECTURE INTERIOR DESIGN

March 19, 2018

Re: Application for Variance – Building Board of Appeals
Exhibit Summary
Permit No.: BLDG17-0625
3380 Nixon Road
Ann Arbor, Michigan

To Whom It May Concern:

The attached information is an Exhibit Summary and is supplemental to our application for the variance to the interpretation regarding the balconies at The Annex.

Exhibit A – An overall floor plan of the building with a typical balcony location highlighted.
Exhibit B – An excerpt from the a code review completed by Code Enforcement Services (CES), a consultant to the City of Ann Arbor that first addresses the issue of the balconies.
- We have highlighted the segment related to the balcony.

Exhibit C – An excerpt from our response to the code review comments.
- We have highlighted the segment related to the balcony taken from the original code response.
- We have highlighted our response to the comment based on our interpretation of the code. We did not include the referenced detail as the other exhibits more clearly define the specifics of our interpretation.

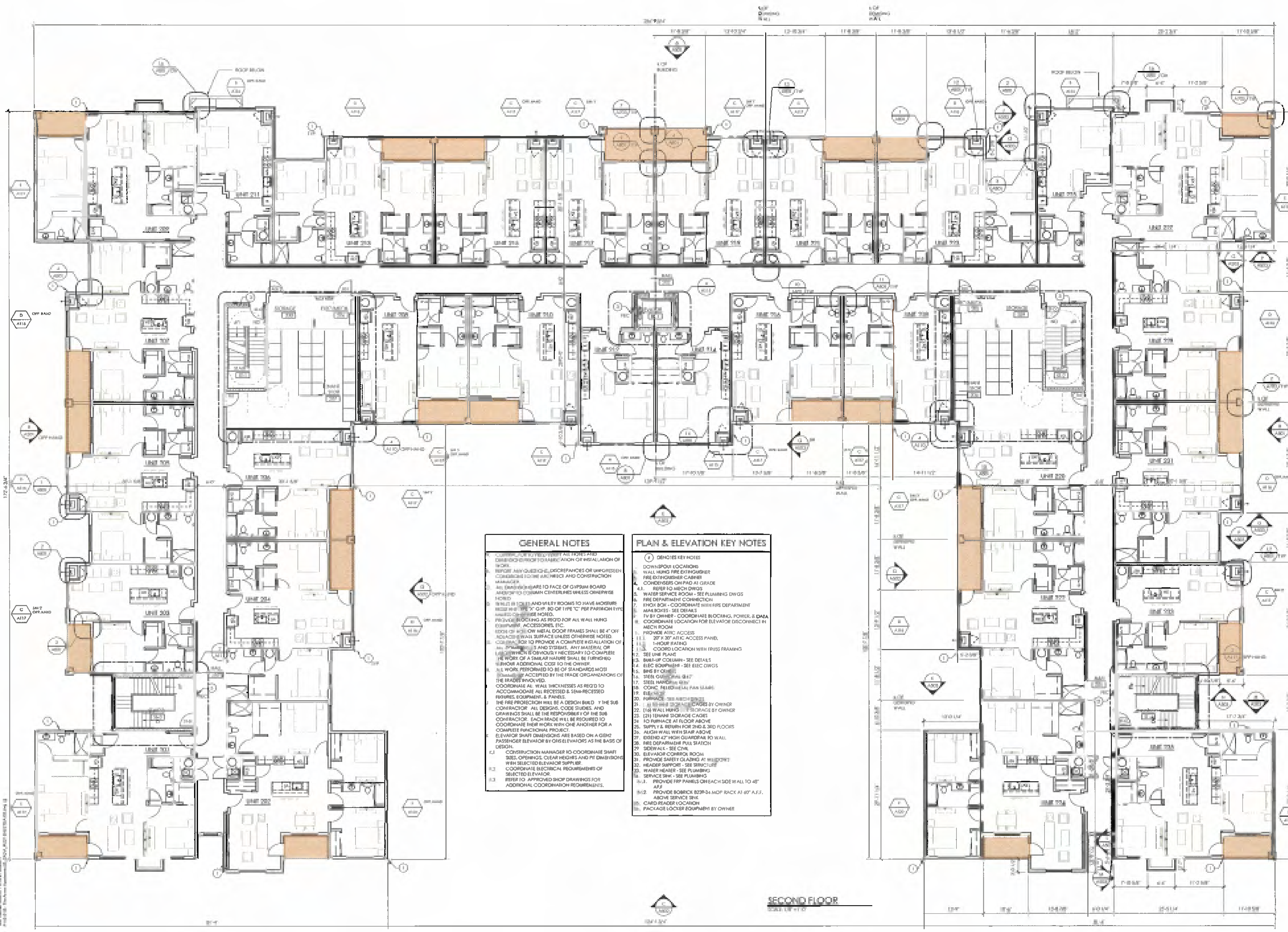
Exhibit D – The second response from Code Enforcement Services.
- This response included segments from the 2015 International Building Code Commentary. While our building is being reviewed under the 2012 code, we agree there is no difference between the two ICC code cycles or the Michigan Building Code as it relates to this issue.
- In addition to the code sections highlighted in yellow by CES we have highlighted in orange the exception we feel is applicable and part of their referenced material.
- We have attached a snapshot of Section 3, Sheet A701 referenced in their response for your information.

Exhibit E – A copy of our documentation submitted to the International Code Council for an interpretation to this issue.
- This submission includes plans and sections that identify the condition as well as an explanation of the sequence of interpretations.

Exhibit F – A copy of the email response from the International Code Council that indicates our interpretation was applicable.
- The balconies are not required to be rated construction.
- Exception No. 3 in Section 1406.3 is applicable.
- Section 420 does not apply to balcony floors.

Exhibit G – A copy of the email response from the Building Official that explains his decision to disagree with our interpretation and the written interpretation by the International Code Council.

EXHIBIT A



SECOND FLOOR

GENERAL NOTES

A. CONTRACTOR TO FIELD VERIFY ALL NOTES AND DIMENSIONS PRIOR TO FABRICATION OR INSTALLATION OF WORK.
B. REPORT ANY QUESTIONS, DISCREPANCIES OR UNFORESEEN CONDITIONS TO THE ARCHITECT AND CONSTRUCTION MANAGER.
C. ALL DIMENSIONS ARE TO FACE OF GYPSUM BOARD AND/OR TO COLUMN CENTERLINES UNLESS OTHERWISE NOTED.
D. [illegible] AND UTILITY ROOMS TO HAVE MOISTURE [illegible] TYPE "X" GYP. BD OR TYPE "C" PER PARTITION TYPE UNLESS OTHERWISE NOTED.
E. PROVIDE BLOCKING AS REQ'D FOR ALL WALL HUNG EQUIPMENT, ACCESSORIES, ETC.
F. EDGE OF HOLLOW METAL DOOR FRAMES SHALL BE 4" OFF ADJACENT WALL SURFACE UNLESS OTHERWISE NOTED.
G. CONTRACTOR TO PROVIDE A COMPLETE INSTALLATION OF ALL [illegible]S AND SYSTEMS. ANY MATERIAL OR LABOR WHICH IS OBVIOUSLY NECESSARY TO COMPLETE THE WORK OF A SIMILAR NATURE SHALL BE FURNISHED WITHOUT ADDITIONAL COST TO THE OWNER.
H. ALL WORK PERFORMED TO BE OF STANDARDS MOST [illegible] ACCEPTED BY THE TRADE ORGANIZATIONS OF THE TRADES INVOLVED.
I. COORDINATE ALL WALL THICKNESSES AS REQ'D TO ACCOMMODATE ALL RECESSED & SEMI-RECESSED FIXTURES, EQUIPMENT, & PANELS.
J. THE FIRE PROTECTION WILL BE A DESIGN BUILD BY THE SUB CONTRACTOR. ALL DESIGNS, CODE STUDIES, AND DRAWINGS SHALL BE THE RESPONSIBILITY OF THE SUB CONTRACTOR. EACH TRADE WILL BE REQUIRED TO COORDINATE THEIR WORK WITH ONE ANOTHER FOR A COMPLETE FUNCTIONAL PROJECT.
K. ELEVATOR SHAFT DIMENSIONS ARE BASED ON A GEN2 PASSENGER ELEVATOR BY OTIS ELEVATORS AS THE BASIS OF DESIGN.
K.1 CONSTRUCTION MANAGER TO COORDINATE SHAFT SIZES, OPENINGS, CLEAR HEIGHTS AND PIT DIMENSIONS WITH SELECTED ELEVATOR SUPPLIER.
K.2 COORDINATE ELECTRICAL REQUIREMENTS OF SELECTED ELEVATOR.
K.3 REFER TO APPROVED SHOP DRAWINGS FOR ADDITIONAL COORDINATION REQUIREMENTS.

PLAN & ELEVATION KEY NOTES

(#) DENOTES KEY NOTES

1. DOWNSPOUT LOCATIONS
2. WALL HUNG FIRE EXTINGUISHER
3. FIRE EXTINGUISHER CABINET
4. CONDENSERS ON PAD AT GRADE
4.1. REFER TO MECH DWGS
5. WATER SERVICE ROOM - SEE PLUMBING DWGS
6. FIRE DEPARTMENT CONNECTION
7. KNOX BOX - COORDINATE WITH FIRE DEPARTMENT
8. MAILBOXES - SEE DETAILS
9. TV BY OWNER - COORDINATE BLOCKING, POWER, & DATA
10. COORDINATE LOCATION FOR ELEVATOR DISCONNECT IN MECH ROOM
11. PROVIDE ATTIC ACCESS
11.1. 20" X 30" ATTIC ACCESS PANEL
11.2. 1-HOUR RATING
11.3. COORD LOCATION WITH TRUSS FRAMING
12. SEE UNIT PLANS
13. BUILT-UP COLUMN - SEE DETAILS
14. ELEC EQUIPMENT - SEE ELEC DWGS
15. BINS BY OTHER[illegible]
16. STEEL GU[illegible]
17. STEEL HANDR[illegible]
18. CONC. FILLED [illegible]
19. ELE[illegible]
20. FURNACE [illegible]
21. [illegible] CAGES BY OWNER
22. (16) WALL HUNG [illegible] STORAGE BY OWNER
23. (21) TENANT STORAGE CAGES
24. TO FURNACE AT FLOOR ABOVE
25. SUPPLY & RETURN FOR 2ND & 3RD FLOORS
26. ALIGN WALL WITH STAIR ABOVE
27. EXTEND 42" HIGH GUARDRAIL TO WALL
28. FIRE DEPARTMENT PULL STATION
29. SIDEWALK - SEE CIVIL
30. ELEVATOR CONTROL ROOM
31. PROVIDE SAFETY GLAZING AT W[illegible]
32. HEADER SUPPORT - SEE STRUCTURE
33. WATER HEATER - SEE PLUMBING
34. SERVICE SINK - SEE PLUMBING
34.1. PROVIDE FRP PANELS ON EACH SIDE WALL TO 48" A.F.F.
34.2. PROVIDE BOBRICK B239-34 MOP RACK AT 60" A.F.F. ABOVE SERVICE SINK
35. CARD READER LOCATION
36. PACKAGE LOCKER EQUIPMENT BY OWNER

ConceptDesign

THE ANNEX OF ANN ARBOR

The Annex
3380 Nixon Road
Ann Arbor, MI

12/19/2016 SCHEMATIC DESIGN
01/23/2017 DESIGN DEVELOPMENT

SECOND FLOOR PLANS

SHEET: A102

FILE: 1612-05

CODE ENFORCEMENT SERVICES
A division of Carlisle/Wortman Associates, Inc.
117 N. First St., Suite 70
Ann Arbor, Michigan 48104

Phone: 734-662-2200
Fax: 734-662-1935

EXHIBIT B

May 18, 2017

Concept Design
89 Monroe Center NW
Grand Rapids, MI 49503

Re: The Annex
3380 Nixon Rd.
Ann Arbor, MI

Dear Concept Design,

I have reviewed the proposed work at the above address for compliance with the current codes adopted by the State of Michigan. The project was reviewed for conformance to the requirements of the 2015 Michigan Building Code (MBC) as well as the 2015 Michigan Mechanical (MMC) and Plumbing Codes (MPC), the 2014 Michigan Electrical Code (MEC), and the affiliated codes and standards referenced in those documents including the Michigan Uniform Energy Code and 1966 PA 1 regarding accessibility.

Please address the following issues so that we may continue the plan review process and be able to recommend approval in an expeditious manner:

Apartment Buildings (3 identical buildings of 88 units each)
(Indicated as a type V-A, fully sprinkled R-2 occupancy)

1. Please note and verify that the fire suppression system will be an NFPA 13, not a 13R system, throughout the building.

2. The continuity of the one hour fire rated construction elements must continue through each unit to the edge of the exterior, including across and over / under each balcony area (MBC 420.2; 420.3; 708.4 and 711.2.2).

3. Please provide draftstopping in the floor / ceiling area in accordance with section MBC 718.3.2 or, if exception 1 is selected, verify that the sprinkler coverage will include the attic area to the extend required by the NFPA 13 standard.

4. Please provide draftsopping in the roof / ceiling area in accordance with section MBC 718.4.2 or, if exception 2 is selected, verify that the sprinkler coverage will include the attic area to the extend required by the NFPA 13 standard.

5. Please provide an energy code compliance report in accordance with ANSI/ASHRAE/IESNA Standard 90.1-2007 section 4.2.2.2 (Please include mechanical and electrical information).

ConceptDesign
ARCHITECTURE & INTERIOR DESIGN

EXHIBIT C

July 24, 2017

Mr. Larry Pickel
Construction Code Division
Code Enforcement Services
117 N. First Street, Suite 70
Ann Arbor, Michigan 48104

RE: The Annex – Response to Code Review Comments
Permit No.: BLDG17-0625
3380 Nixon Road
Ann Arbor, Michigan

Mr. Pickel,
The following is our response to your code review comments for the aforementioned project. We have included your original comments with our response in italics below.

General Comments:

1. The drawings were submitted for review to the City of Ann Arbor prior to the change in the Michigan Codes. The design and review should reflect the 2012 Michigan Building, Mechanical and Plumbing Codes. Other than possible section references we believe there to be no significant changes in the comments.
2. When necessary our response will reflect references to the 2012 Codes in affect at the time the drawings were submitted.
3. Addendums 2 & 3 incorporate these and additional coordination changes.

Apartment Buildings (3 identical buildings of 88 units each)
(Indicated as a type V-A, fully sprinkled R-2 occupancy)

1. Please note and verify that the fire suppression system will be an NFPA 13, not a 13R system, throughout the building.
    a. *The fire suppression system is an NFPA 13 system to allow for the area increases as noted in the Building Code Data on sheet G201.*
2. The continuity of the one hour fire rated construction elements must continue through each unit to the edge of the exterior, including across and over / under each balcony area (MBC 420.2; 420.3; 708.4 and 711.2.2).
    a. *Sections 420.2 and 420.3 are not changed from the 2012 code. We have provided fire partitions and horizontal assemblies to comply with separation.*
    b. *The walls and horizontal assemblies are extended to the weather exterior of the building. We do not find a specific reference to require the extension noted for the balconies in the 2012 or 2015 codes.*
    c. *Our interpretation of Section 1406.3; Exception 3 would allow the framing of the balcony to be of Type V construction and would not be required to be fire rated with the inclusion of sprinkler protection. Sprinkler protection is to be provided.*
    d. *As a further note the balconies have been revised to open framing and Trex decking.*
        i. *Refer to included drawings for a typical detail.*

EXHIBIT D

CODE ENFORCEMENT SERVICES

A division of Carlisle/Wortman Associates, Inc.
117 N. First St., Suite 70
Ann Arbor, Michigan 48104

Phone: 734-662-2200
Fax: 734-662-1935

August 14, 2017

Concept Design
89 Monroe Center NW
Grand Rapids, MI 49503

Re: The Annex
3380 Nixon Rd.
Ann Arbor, MI

Dear Concept Design,

I have reviewed the proposed revisions dated July 24, 2017 and have the following comments:

Apartment Buildings (3 identical buildings of 88 units each) (Indicated as a type V-A, fully sprinkled R-2 occupancy)

1. The continuity of the one hour fire rated construction elements must continue through each unit to the edge of the exterior, including across and over/under each balcony area (MBC 420.2; 420.3; 708.4 and 711.2.2). Table 601 prescribes for a 1 hour fire resistance wall and floor assembly. Your detail #3 on page A701 is correct with regard to the floor/ceiling assembly (1406.3). Open flooring and Trex will not provide that rating as proposed in your revision letter. Also, separating the balconies (Units) with a 1 hour rating is required by 420.2.

2. Please provide an energy code compliance report in accordance with ANSI/ASHRAE/IESNA Standard 90.1-2007 section 4.2.2.2 (Please include mechanical and electrical information). Note: We have not been provided any documents which would demonstrate compliance with the Energy Code.

Community Building
(Revision notes change to type V-B construction and non-suppressed.) A-3 first floor and Storage in basement.

1. Please provide an energy code compliance report in accordance with ANSI/ASHRAE/IESNA Standard 90.1-2007 section 4.2.2.2 (Please include mechanical and electrical information).

2. Please refer to section 903.2.11.1 for windowless stories (openings or suppression).

Craig E. Strong, Director
Construction Code Division
Code Enforcement Services

dent radiant heat flux that does not cause sustained flaming of the exterior wall covering.

❖ Exterior wall coverings with a lower tolerance to radiant heat (less than 12.5 kW/m^2) can be used, but the trade-off is an increased fire separation distance to reduce the potential of ignition from radiant heat.

TABLE 1406.2.1.1.2
MINIMUM FIRE SEPARATION FOR COMBUSTIBLE EXTERIOR WALL COVERINGS

FIRE SEPARATION DISTANCE (feet)	TOLERABLE LEVEL INCIDENT RADIANT HEAT ENERGY (kW/m^2)	FIRE SEPARATION DISTANCE (feet)	TOLERABLE LEVEL INCIDENT RADIANT HEAT ENERGY (kW/m^2)
5	12.5	16	5.9
6	11.8	17	5.5
7	11.0	18	5.2
8	10.3	19	4.9
9	9.6	20	4.6
10	8.9	21	4.4
11	8.3	22	4.1
12	7.7	23	3.9
13	7.2	24	3.7
14	6.7	25	3.5
15	6.3		

For SI: 1 foot = 304.8 mm, 1 Btu/H^2 × °F = 0.0057 kW/m^2 × K.

❖ The table provides an increased minimum fire separation distance where the resistance of a material to radiant heat is less than the 12.5 kW/m^2 required for veneers on walls with a separation distance of 5 feet (1524 mm). The required resistance to radiant heat decreases with increasing separation distances. It is not anticipated that interpolation will be involved, since fire separation distances are not enforced in fractions of feet. For example, if testing indicated a tolerable level of radiant heat energy of 9.5 kW/m^2, the required minimum fire separation distance would be 10 feet (30 480 mm).

1406.2.2 Location. Combustible exterior wall coverings located along the top of exterior walls shall be completely backed up by the exterior wall and shall not extend over or above the top of the exterior wall.

❖ Combustible trim is not permitted to extend above the exterior wall to which it is attached. This is intended to limit the overall potential involvement of exterior combustible materials in a fire and to reduce the risk of fire spreading to or from such materials from the interior limits of the building. A typical example of architectural trim in this instance is a wood canopy attached to the exterior wall of a strip shopping center, with the canopy fully backed up by the wall.

1406.2.3 Fireblocking. Where the combustible exterior wall covering is furred out from the exterior wall and forms a solid surface, the distance between the back of the exterior wall covering and the exterior wall shall not exceed $1^5/_8$ inches (41 mm). The concealed space thereby created shall be fireblocked in accordance with Section 718.

Exception: The distance between the back of the exterior wall covering and the exterior wall shall be permitted to exceed $1^5/_8$ inches (41 mm) where the concealed space is not required to be fireblocked by Section 718.

❖ This section limits the area of concealed space behind combustible veneers installed on the exterior of buildings of Type I, II, III or IV construction. The intent of fireblocking is to limit the potential for fire to spread through the concealed spaces formed by combustible veneers or architectural trim. Fireblocking materials and methods are regulated by Section 718.

The exception allows for larger distances between the exterior wall covering and the exterior wall, provided that firestopping in accordance with Section 718 is not required. The applicable exception in Section 718.2.6 is Exception 2, which allows the fireblocking to be omitted when the face of the combustible exterior wall covering exposed to the concealed space is covered by the noncombustible materials listed in that exception. Furthermore, Exception 3 to Section 718.2.6 allows the omission of fireblocking in these concealed spaces when the exterior wall covering has been tested in accordance with NFPA 285 and has successfully met the acceptance criteria therein. In both those cases, there will be little opportunity for a fire in the concealed space to spread via the materials in the concealed space because of their noncombustible coverings or because they successfully passed NFPA 285 to show limited fire and flame spread over the face of, as well as within the interior of, the exterior wall system.

1406.3 Balconies and similar projections. Balconies and similar projections of combustible construction other than fire-retardant-treated wood shall be fire-resistance rated where required by Table 601 for floor construction or shall be of Type IV construction in accordance with Section 602.4. The aggregate length of the projections shall not exceed 50 percent of the building's perimeter on each floor.

Exceptions:

1. On buildings of Type I and II construction, three stories or less above *grade plane*, *fire-retardant-treated wood* shall be permitted for balconies, porches, decks and exterior stairways not used as required exits.
2. Untreated wood is permitted for pickets and rails or similar guardrail devices that are limited to 42 inches (1067 mm) in height.
3. Balconies and similar projections on buildings of Type III, IV and V construction shall be permitted to be of Type V construction, and shall not be required to have a *fire-resistance rating* where sprinkler protection is extended to these areas.

of fires where people live. These occupancies need to be provided automatic sprinkler system protection. Requiring a minimum fire resistance to the construction separating both units and residential areas from nonresidential areas provides an extra level of protection in people's homes from occurrences in their neighbors' homes. These separations are required between live/work units as provided in Section 419, but separations within each live/work unit between residential and nonresidential uses are not required.

420.2 Separation walls. Walls separating *dwelling units* in the same building, walls separating *sleeping units* in the same building and walls separating *dwelling* or *sleeping units* from other occupancies contiguous to them in the same building shall be constructed as *fire partitions* in accordance with Section 708.

❖ The sleeping units or dwelling units that are in a single building are required to be separated by fire partitions complying with Section 708, or horizontal fire-resistance-rated assemblies complying with Section 711. Fire partitions are the least robust of all fire-resistance-rated walls called out in the code. These occupancies all require smoke alarms in the sleeping areas of the units, and occupancies in Groups I-1 and R-1 also require general fire alarms. In addition, these occupancies are all required to be sprinklered. The reason for the nominal fire-resistant separation is to account for the fact that individuals asleep in these units could respond more slowly to a fire; therefore, some amount of fire resistance is deemed necessary to protect these occupants.

Section 708.3 requires fire partitions to be not less than 1-hour fire-resistance rated. If the building's sprinkler protection is provided by a system complying with NFPA 13, the rating can be reduced to 30 minutes. Section 708.4 requires 1-hour-rated fire partitions to be supported by construction that has the same rating or better; however, this requirement is waived for these separation walls in buildings of Type II B, IIIB and VB construction.

This requirement also applies to walls that separate these Group R and I occupancies from other occupancies in the building. Even if those other areas are regulated under the accessory occupancies or nonseparated occupancies option of mixed occupancies contained in Sections 508.2 or 508.3 respectively, these partitions and horizontal assemblies are still required.

420.3 Horizontal separation. Floor assemblies separating *dwelling units* in the same buildings, floor assemblies separating *sleeping units* in the same building and floor assemblies separating *dwelling* or *sleeping units* from other occupancies contiguous to them in the same building shall be constructed as *horizontal assemblies* in accordance with Section 711.

❖ See the commentary to Section 420.2. Section 711.2 requires floor assemblies providing this separation to be not less than 1-hour fire-resistance rated. If the building's sprinkler protection is provided by a system complying with NFPA 13, the rating can be reduced to 30 minutes. Section 708.4 requires 1-hour-rated fire partitions to be supported by construction that has the same rating or better; however, this requirement is waived for these floor assemblies in buildings of Type IIB, IIIB and VB construction.

420.4 Smoke barriers in Group I-1, Condition 2. Smoke barriers shall be provided in Group I-1, Condition 2, to subdivide every story used by persons receiving care, treatment or sleeping and to provide other stories with an occupant load of 50 or more persons, into no fewer than two smoke compartments. Such stories shall be divided into smoke compartments with an area of not more than 22,500 square feet (2092 m^2) and the distance of travel from any point in a smoke compartment to a smoke barrier door shall not exceed 200 feet (60 960 mm). The smoke barrier shall be in accordance with Section 709.

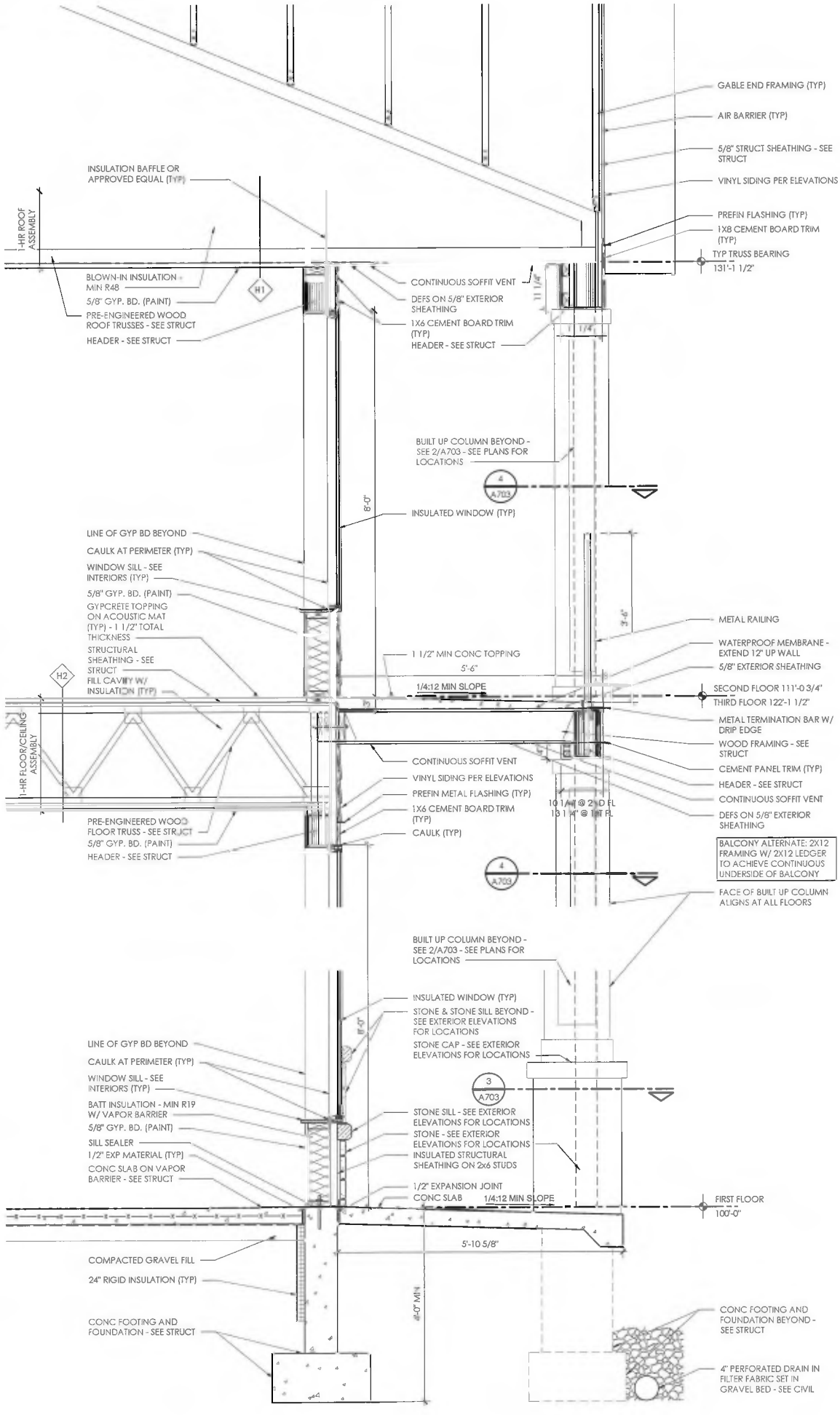
❖ Group I-1, Condition 2 allows occupants that may need assistance with evacuation (see Section 308.3.2). Smoke barriers and the associated compartmentalization is a key protective feature utilized for this occupant type. Requirements mostly match Group I-2 smoke barrier criteria provided in Section 407 with the following noted differences: The refuge area is 15 feet (4572 mm) for each care recipient in a Group I-1, Condition 2 versus the 30 square feet (2.8 m^2) required in Group I-2. There are no bed or stretcher occupants in Group I-1, Condition 2, meaning occupants can be moved during emergencies without having to be moved in a bed. The Group I-1, Condition 2 areas permitted to be included in the calculation do not include sleeping areas (sleeping room) as permitted in Group I-2. Sleeping areas are included in Group I-2 because of defend-in-place strategies during emergencies. Group I-1, Condition 2 occupants utilize smoke compartments for a staged evacuation in accordance with the IFC but are not supposed to stay in their rooms during emergencies.

420.4.1 Refuge area. Refuge areas shall be provided within each smoke compartment. The size of the refuge area shall accommodate the occupants and care recipients from the adjoining smoke compartment. Where a smoke compartment is adjoined by two or more smoke compartments, the minimum area of the refuge area shall accommodate the largest occupant load of the adjoining compartments. The size of the refuge area shall provide the following:

1. Not less than 15 net square feet (1.4 m^2) for each care recipient.
2. Not less than 6 net square feet (0.56 m^2) for other occupants.

Areas or spaces permitted to be included in the calculation of the refuge area are corridors, lounge or dining areas and other low-hazard areas.

❖ Under this provision, refuge areas are only required for Group I-1, Condition 2 occupancies. They are not required for other Group I-1 occupancies or the Group R occupancies. Similar refuge areas are required for Group I-2 occupancies (Section 407) and



3 SECTION
3/4"=1'-0"

ConceptDesign
ARCHITECTURE INTERIOR DESIGN

EXHIBIT E

October 20, 2017

Re: Balcony/Deck Code Interpretation
2012 Michigan Building Code
Project Location: Ann Arbor, Michigan

To Whom It May Concern:

We are requesting a determination of the balcony/deck requirements for a 3-story wood apartment building to be located in Ann Arbor, Michigan. The following is our code interpretation of the requirements and our request for a clarification on the requirements for rated assemblies.

- The Use and Occupancy of the building is R-2 Residential
- The proposed Construction Type is Type VA
- The building is protected with an NFPA 13 sprinkler system in order to get the allowable sprinkler increases not available with other sprinkler systems.
- The building complies with the allowable height and area requirements based on Use Group and Construction Type.
    - Buildings are 3 stories which complies with the allowable per Table 503.
    - Buildings are less than 50'-0" tall which complies with the allowable per Table 503.
    - Building area per floor is 33,100 SF which is less than the allowable of 36,000 SF with sprinkler increase (12,000 base + 24,000 sprinkler).
- We have included the 2012 Michigan Building Code text from the applicable sections.
- We have included our interpretation of the requirements based on the code text and commentary.
- We have included text or imagery from the 2012 Building Code commentary and our drawings that was instrumental in forming our interpretation.

Reason for the Interpretation:

1. Per Section 1406.3 we have interpreted that the balconies may be constructed of Type V construction materials and are not required to have a fire resistance rating as we have provided sprinkler protection for the balconies per Exception 3.
2. The city's third party reviewer, a local consultant has interpreted that the decks are part of the unit and therefore required to have a one-hour rating. We have discussed this with the AHJ and their consultant and informed them we will be requesting an interpretation.
    a. They have indicated that Section 420 requires a separation between the dwelling units in a building. We agree with and have provided the appropriate walls (per 708) and floors (per 711) as it applies to areas within the exterior walls.
    b. They have indicated that this separation requirement includes the balcony which they identify as part of the dwelling unit.
        i. While part of the unit we believe the referenced exception allows for the elimination of the rating requirements.

c. In previous discussions with the reviewer they have noted that per 1406.3 the balcony shall be fire-resistance rated "where required by Table 601 for floor construction".
    i. They supported this interpretation with the position that the balcony is part of the "building area" and "gross floor area" as defined in the code.
    ii. Their interpretation identifies the outdoor deck as a "floor" subject to a Table 601 and Section 711. And their position is that the Exception we reference is not applicable.
    iii. We feel that the commentary notes the requirement as it pertains to Chapter 5 area determinations and Chapter 10, occupant load.
    iv. We also feel the commentary supports the use of the Exception in this case as the sprinkler protection provides an active protection versus the passive protection of a rating. This is consistent with other sections of the code that offer reductions or eliminations of requirements with the presence of sprinkler protection.
d. They have indicated that section 1406.3 is for combustible materials on the exterior side of exterior walls. However, they believe that with a roof structure over the deck, the dwelling unit is now considered to be expanded to the outside of the deck (underneath roof).
    i. They interpret that the balcony is no longer considered a projection on an exterior wall, but part of the dwelling unit with a fire hazard under a roof structure. Thus requiring the ratings as indicated in section 420.
    ii. In discussion, they agree that without the roof overhang element the decks would be considered a projection and the noted exceptions of section 1406.3 would be applicable.
    iii. We find this contradictory as each balcony acts similarly as a projection above the space below. The presence of a roof at the topmost level has little to no impact on the performance or threat level of the lower levels.
    iv. As noted above, the presence of sprinkler protection as a requirement for the exception provides an increased level of protection.
e. The reviewer has also indicated that the wall between balconies is required to be rated for separation and support.
    i. This is an extension of their interpretation that the separation requirements extend beyond the exterior wall due to the presence of the roof.

Interpretation questions:

1. Can Exception 3 of Section 1406.3 be applied to a balcony if the balcony is under the overhang of a roof?
2. Where applicable does the rating reduction allowed by Exception 3 extend to the supporting construction? Specifically post support and header.
3. Is a rated separation wall required for walls separating unit balconies when the wall and balcony are outside the exterior walls?

SUPPLEMENTAL DATA:

AREA, BUILDING. The area included within surrounding *exterior walls* (or *exterior walls* and *fire walls*) exclusive of vent *shafts* and *courts*. Areas of the building not provided with surrounding walls shall be included in the building area if such areas are included within the horizontal projection of the roof or floor above.

- **Code Commentary:** Allowable building areas (as established by the provisions of Chapter 5 and Table 503) are a function of the potential fire hazard and the level of fire endurance of the building's structural elements, as defined by the types of construction in Chapter 6. A building area is the "footprint" of the building; that is, the area measured within the perimeter formed by the inside surface of the exterior walls. This excludes spaces that are inside this perimeter and open to the outside atmosphere at the top, such as open shafts and courts (see Section 1206). When a portion of the building has no exterior walls, the area regulated by Chapter 5 is defined by the projection of the roof or floor above [see Figure 202.1(7)]. The roof overhang on portions of a building where there are exterior enclosure walls does not add to the building area because the area is defined by exterior walls.
- **Interpretation:** Our interpretation is that the intent of this definition is to define the building area as it relates to Chapter 5 and the allowable area limits.
    - We agree that the areas of balconies or decks covered by a roof or deck above should be included in the floor area calculations for Table 503.
    - The reference to roof overhang we would interpret as eaves, rakes or similar projections.

EXTERIOR WALL. A wall, bearing or nonbearing, that is used as an enclosing wall for a building, other than a *fire wall*, and that has a slope of 60 degrees (1.05 rad) or greater with the horizontal plane.

- Included for reference.

FLOOR AREA, GROSS. The floor area within the inside perimeter of the *exterior walls* of the building under consideration, exclusive of vent *shafts* and *courts*, without deduction for *corridors*, *stairways*, closets, the thickness of interior walls, columns or other features. The floor area of a building, or portion thereof, not provided with surrounding *exterior walls* shall be the usable area under the horizontal projection of the roof or floor above. The gross floor area shall not include *shafts* with no openings or interior *courts*.

- **Code Commentary:** Gross floor area is that area measured within the perimeter formed by the inside surface of the exterior walls. The area of all occupiable and nonoccupiable spaces, including mechanical and elevator shafts, toilet rooms, closets and mechanical equipment rooms, are included in the gross floor area. This area could also include any covered porches, carports or other exterior space intended to be used as part of the building's occupiable space. This gross and net floor area is primarily used for the determination of occupant load in accordance with Table 1004.1.2.
- **Interpretation:** We agree that the balconies/deck are part of the gross floor area for determination of the occupant load and as previously referenced the allowable building area. However, as a balcony/deck the exceptions in Section 1406.3 would be applicable.

Section 711 Horizontal Assemblies § 711.4 Continuity. Assemblies shall be continuous without openings, penetrations or joints except as permitted by this section and Sections 712.1, 714.4, 715, 1009.3 and 1022.1. Skylights and other penetrations through a fire-resistance rated roof deck or slab are permitted to be unprotected, provided that the structural integrity of the fire-resistance-rated roof assembly is maintained. Unprotected skylights shall not be permitted in roof assemblies required to be fire-resistance rated in accordance with Section 705.8.6. The supporting construction shall be protected to afford the required *fireresistance rating* of the *horizontal assembly* supported.

- **Interpretation:** While not specifically referenced our typical interpretation of continuity includes "to the exterior walls". This is the common interpretation in our experience and stems from the requirement noted in Section 706. 5 for the horizontal continuity of fire walls.

1406.3 Balconies and similar projections. Balconies and similar projections of combustible construction other than fire-retardant-treated wood shall be fire-resistance rated where required by Table 601 for floor construction or shall be of Type IV construction in accordance with Section 602.4. The aggregate length of the projections shall not exceed 50 percent of the building's perimeter on each floor.

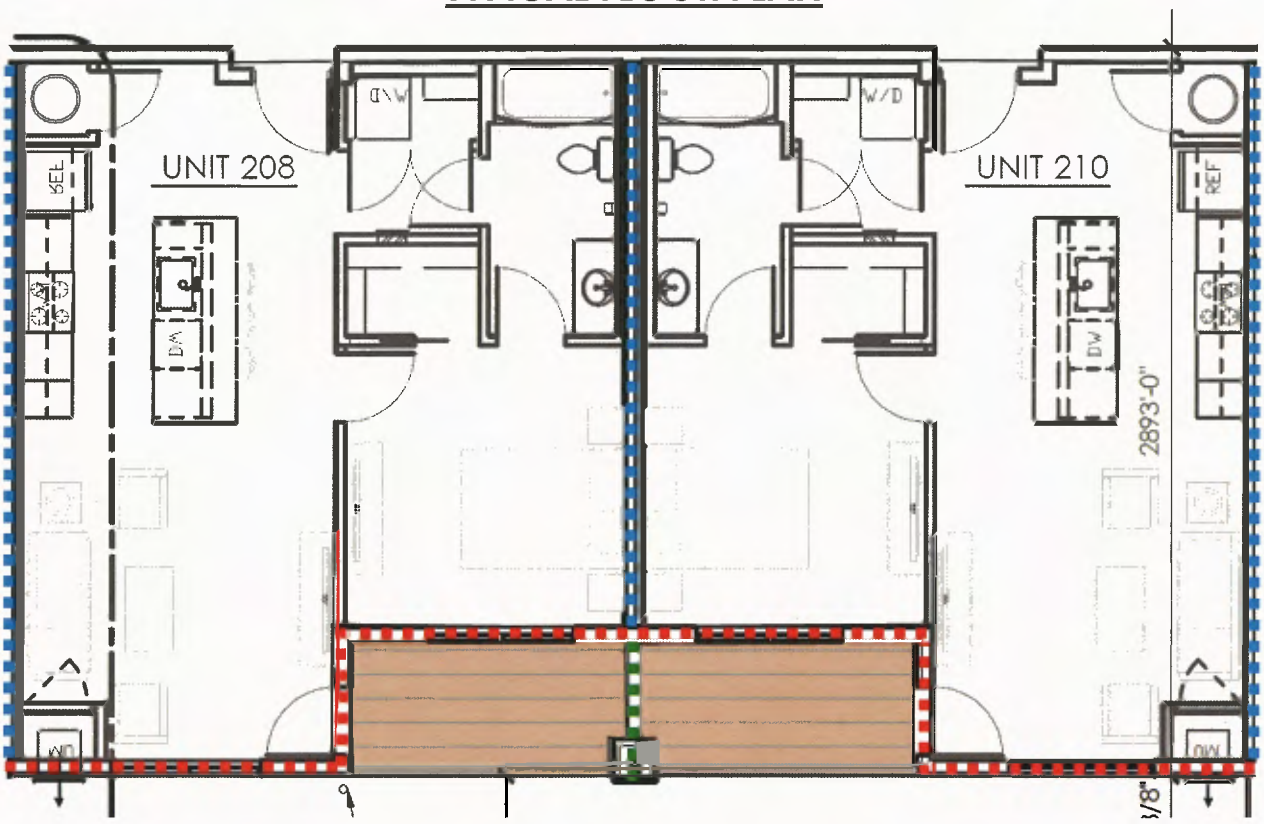
- **Code Commentary:** Because these elements are, in a sense, an extension of floor construction, combustible appendages are required to afford the same required fire-resistance rating as required for floor construction in Table 602, unless the appendage is of FRTW or heavy timber construction (Type IV construction). As an additional safeguard against exterior fire spread, the aggregate length of combustible appendages must not exceed 50 percent of the building perimeter on each floor. Balconies, porches, decks, supplemental exterior stairs and similar appendages in buildings of Types I and II construction are required to be constructed of noncombustible materials in order to prevent fire involvement and fire spread up or along the exterior of a noncombustible building. In buildings of Types III, IV and V construction, the use of combustible materials for these elements is permitted.

Exceptions:

3. Balconies and similar projections on buildings of Type III, IV and V construction shall be permitted to be of Type V construction, and shall not be required to have a fire-resistance rating where sprinkler protection is extended to these areas.

- **Code Commentary:** Exception 3 is applicable to buildings of Types III, IV and V construction. Balconies and similar projections need not be constructed of FRTW nor have a fire-resistance rating when the appendages are protected with an automatic sprinkler system. The presence of sprinkler protection, such as a dry pendent sprinkler, will also serve to limit fire spread from floor to floor.
- **Interpretation:** Our interpretation is that the balconies/decks in this type of application are permitted to be of Type V construction per Exception 3.
  - Our building is of Type VA construction although there is no distinction made between Type VA and Type VB.
  - The decks will be provided with automatic sprinkler protection. The protection will be a dry pendant extended from the interior building system.

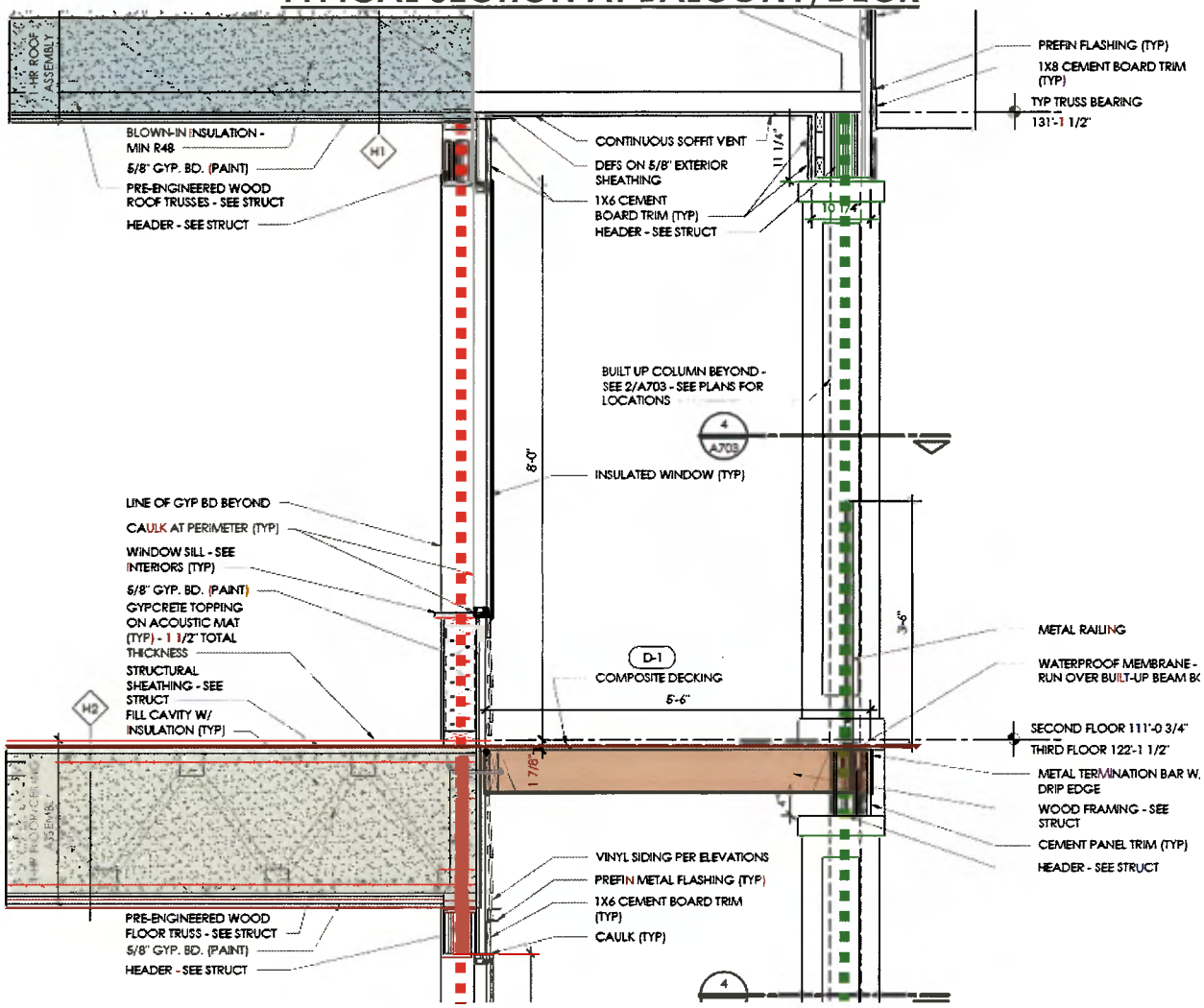
TYPICAL FLOOR PLAN



FLOOR PLAN KEY

- Interior Demising Wall – Rated
- Exterior Wall – Rated
- Interior Floor Area – Horizontal Assembly Rating Provided
- Exterior Balcony/Deck – Not Rated
- Exterior Deck Support – Not Rated

TYPICAL SECTION AT BALCONY/DECK



FLOOR PLAN KEY

- Horizontal Floor Assembly – Rated
- Horizontal Roof Assembly - Rated
- Exterior Wall – Rated
- Exterior Balcony/Deck – Not Rated
- Exterior Deck Support – Not Rated

EXHIBIT F

From: D. n Hardi g [mailto:dan@conceptgr.com]
Sent: Thursday, November 30, 2017 2:37 PM
To: Dempsey, Glen <GDempsey@a2gov.org>
Cc: Andrew Eckert <Andrew@conceptgr.com>; Larry Pickel <lpickel@cescode.com>; Craig Strong <cstrong@cescode.com>
Subject: Fwd: Section 1406.3 - 2012 MBC

Email response forwarded to Ann Arbor Building Official and Consultant Reviewer
Email from ICC is included below

Glen,

We received our response from the ICC regarding the balcony projections which is included in the email below. It supports our position that the sprinkler protection noted in Exception No. 3 would apply to the balconies.

You had mentioned speaking to a representative from ICC located in Alabama. The interpretation came from Mr. Doug Connell, he is located in the Birmingham AL office and I was curious if that is who you spoke with. I did ask him for a status update at one point and he indicated that he was complete with his review but was circulating it internally for staff debate. So if you did not speak with Doug hopefully the person you spoke to was part of the internal review.

I know this was a difficult interpretation and we appreciate your patience as we have worked through this issue. At this point I would like to submit my response to the last round of plan review comments. If you would prefer a conference call or a meeting to further discuss I am open to that as well.

Regards,

Dan Harding RA
SENIOR PROJECT ARCHITECT

OFFICE 616.771.0909
MOBILE 616.881.9527
EMAIL Dan@ConceptGR.COM
WEB WWW.ConceptGR.COM

89 MONROE CENTER NW . GRAND RAPIDS . MICHIGAN . 49503

---------- Forwarded message ----------
From: **Doug Connell** <DConnell@iccsafe.org>
Date: Mon, Nov 20, 2017 at 11:30 AM
Subject: RE: Section 1406.3 - 2012 MBC
To: Renee Testroet <rtestroet@iccsafe.org>, "andrew@conceptgr.com" <andrew@conceptgr.com>

eMail response from the International Code Council

Subject: 2012 IBC Section 1406.3

Q: Are sprinklered exterior balconies required to have one-hour fire-resistance rating in a Type VA construction Group R-2 apartment building?

A: No. Balconies on the exterior of buildings (outside the exterior walls) are covered in Section 1406.3. Section 1406.3 is a general requirement that addresses balcony fire-resistance ratings and requires the balconies to be rated the same as floors in Table 601. Exception #3 is an exception to the requirement in Section 1406.3 for the balconies to be rated as per Table 601. Section 420 requires dwelling unit separation in all types of construction.

Private balconies accessed through the dwelling units are still exterior projections and are covered in Section 1406.3 and the exception to the fire-resistance rating for the sprinklered balcony floors is valid whether the balcony is an extension of the dwelling unit or an exit access balcony. Section 420 does not apply to balcony floors.

Code opinions issued by ICC staff are based on ICC published codes and do not include local, state or federal codes, policies or amendments. This opinion is based on the information which you have provided. We have made no independent effort to verify the accuracy of this information nor have we conducted a review beyond the scope of your question. This opinion does not imply approval of an equivalency, specific product, specific design, or specific installation and cannot be published in any form implying such approval by the International Code Council. As this opinion is only advisory, the final decision is the responsibility of the designated authority charged with the administration and enforcement of this code.

James D. Connell, P.E.

Team Leader, A & E Services

International Code Council, Inc.

Birmingham District Office

900 Montclair Road

Birmingham, AL 35213

888-ICC-SAFE (422-7233), X5226 phone

dconnell@iccsafe.org

www.iccsafe.org

The International Code Council (ICC) Plan Review Services staff of professionals is ready and available to serve your plan review needs. Please contact the ICC Plan Review Department at 1-888-ICCSAFE (422-7233) extension 33809, or visit the ICC website at: www.iccsafe.org/cs/techservices/

Gmail by Google

EXHIBIT G

Dan Harding <dan@conceptgr.com>

RE: 2012 Michigan Building Code Section 1406.3, 420.2 420.3 - 3380 Nixon Road

messages

Email response from Ann Arbor Building Official

empsey, Glen <GDempsey@a2gov.org> Wed, Jan 31, 2018 at 10:10 AM
o: Dan Harding <dan@conceptgr.com>
c: "lpickel@cescode.com" <lpickel@cescode.com>, Craig Strong <cstrong@cescode.com>, "Howell, Marc" MHowell@a2gov.org>

Good Morning Dan,

I hope you also enjoyed your Holidays.

Over the last couple weeks I have had further discussions with my plan reviewers and ICC – Chicago office. I have also talked with the actual Plan Examiner Doug Connell, that wrote the interpretation. In my discussion with ICC Chicago office it was apparent that the interpretation was not agreed upon, by all in those ranks.

During my investigation of the codes, I took into consideration the interpretation from ICC and discussions with ICC and other Code Officials, but I am still of the opinion that the decks in this project with the roof overhead should be considered part of the building, by definition of "AREA, BUILDING". This then would entail complying with the code sections 420.2 & 420.3. If the roof was eliminated over the decks, I would agree and consider this a projection off the building and Section 1406.3 would apply.

As you know, there can be many different determinations made on code issues which all may not agree, but the final approval is with the Jurisdiction of Authority. While I do not agree with your code path or the ICC written interpretation, I would look forward to your revisions in regards to the balconies and other requested revisions outstanding (if applicable); OR you do have the option to apply to the City of Ann Arbor Building Board of Appeals and I would be more than happy to assist you with that.

Thank you,

Glen Dempsey

Building Official

City of Ann Arbor

From: Dan Harding [mailto:dan@conceptgr.com]
Sent: Wednesday, January 10, 2018 1:36 PM
To: Dempsey, Glen <GDempsey@a2gov.org>
Cc: lpickel@cescode.com; Craig Strong <cstrong@cescode.com>
Subject: Re: Section 1406.3 - 2012 MBC

Glen,

I hope you had a safe and enjoyable holiday.

I was wondering if you had an opportunity to review the response we received from ICC regarding the balconies at The Annex?

If there is any additional information you need or questions you might have please don't hesitate to contact me.

Regards,

Dan Harding RA
SENIOR PROJECT ARCHITECT

OFFICE 616.771.0909
MOBILE 616.881.9527
EMAIL Dan@ConceptGR.COM
WEB WWW.ConceptGR.COM

89 MONROE CENTER NW . GRAND RAPIDS . MICHIGAN . 49503

On Thu, Nov 30, 2017 at 5:41 PM, Dempsey, Glen <GDempsey@a2gov.org> wrote:

> Hi Dan,
>
> Thank you for sharing this information. I will review and respond shortly.
>
> Thank you again,
>
> Glen Dempsey
>
> Building Official

From: Dan Harding [mailto:dan@conceptgr.com]
Sent: Thursday, November 30, 2017 2:37 PM
To: Dempsey, Glen <GDempsey@a2gov.org>
Cc: Andrew Eckert <Andrew@conceptgr.com>; Larry Pickel <lpickel@cescode.com>; Craig Strong <cstrong@cescode.com>
Subject: Fwd: Section 1406.3 - 2012 MBC

Glen,

We received our response from the ICC regarding the balcony projections which is included in the email below. It supports our position that the sprinkler protection noted in Exception No. 3 would apply to the balconies.

You had mentioned speaking to a representative from ICC located in Alabama. The interpretation came from Mr. Doug Connell, he is located in the Birmingham AL office and I was curious if that is who you spoke with. I did ask him for a status update at one point and he indicated that he was complete with his review but was circulating it internally for staff debate. So if you did not speak with Doug hopefully the person you spoke to was part of the internal review.

I know this was a difficult interpretation and we appreciate your patience as we have worked through this issue. At this point I would like to submit my response to the last round of plan review comments. If you would prefer a conference call or a meeting to further discuss I am open to that as well.

Regards,

Dan Harding RA
SENIOR PROJECT ARCHITECT

OFFICE 616.771.0909
MOBILE 616.881.9527
EMAIL Dan@ConceptGR.COM
WEB WWW.ConceptGR.COM

89 MONROE CENTER NW . GRAND RAPIDS . MICHIGAN . 49503

---------- Forwarded message ----------
From: **Doug Connell** <DConnell@iccsafe.org>
Date: Mon, Nov 20, 2017 at 11:30 AM
Subject: RE: Section 1406.3 - 2012 MBC
To: Renee Testroet <rtestroet@iccsafe.org>, "andrew@conceptgr.com" <andrew@conceptgr.com>